EXHIBIT 8 (REDACTED - MOTION TO SEAL PENDING)

Class-Certification Expert Report

of

Dr. Daniel P. Kessler

In the Matter

of

Peters v. Aetna Inc. et al.

Civil Case No. 1:15-cv-00109-MR (W.D.N.C.)

SUBJECT TO PROTECTIVE ORDER

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Class-Certification Expert Report of Dr. Daniel P. Kessler

I. QUALIFICATIONS

1. I am a tenured professor at the Stanford Graduate School of Business and Stanford Law School; a professor (by courtesy) at the Stanford School of Medicine; a Senior Fellow at Stanford's Hoover Institution and its Institute for Economic Policy Research; and a Research Associate at the National Bureau of Economic Research, the country's leading nonprofit, nonpartisan economic research organization. I teach a University-wide course in health care finance and regulation at Stanford. I have also taught courses in health policy at the Wharton School of the University of Pennsylvania and Harvard Law School. I have served as a consultant to the U.S. Federal Trade Commission, hospitals, health systems, and insurers. I currently serve on Stanford's Committee on Faculty and Staff Human Resources, which oversees the University's health insurance plans and reports to its Chief Financial Officer. I obtained a J.D. from Stanford Law School in 1993 and a Ph.D. in economics from MIT in 1994, specializing in law-and-economics and health economics.

2. My core areas of expertise are health policy, design of health insurance benefits and reimbursement systems, and analysis of medical claims data. I have published numerous books and papers in peer-reviewed journals on health economics, health insurance, and regulation based on empirical analysis of private health insurance and Medicare claims databases. I served as the principal investigator for a grant from the U.S. National Institutes of Health to study how Medicare reimbursement policy should account for hospital integration. I am currently an investigator for a grant from the U.S. Agency for Healthcare Research and Quality to study how physician organizational choices affect the cost and quality of care. I have also received grant support from the U.S. National Science Foundation, The California Health Care Foundation, and the American Cancer Society. My full curriculum vita is attached as Appendix A.

3. To undertake my analysis in this matter, I considered case documents; deposition testimony; and the studies and reports listed in Appendix B. I had access to the pleadings and other materials in the discovery record in the case; the materials I considered and relied on in

reaching my opinions are those listed in Appendix B. If there is additional discovery in the case, I may consider additional information and may supplement this report accordingly. Additionally, I understand that Plaintiff has proposed amending her Complaint; this report focuses on her claims in the original Complaint, so I may consider supplementing this report if the Court allows Plaintiff to amend her Complaint.

4. In the prior four years, I have testified in seven matters:

- *BRFHH Shreveport et al. v. Willis-Knighton Medical Center*, United States District Court, Western District of Louisiana, Case No. 15-cv-2057 (reports and deposition testimony).

- *Lutz Surgical Partners et al. v. Aetna*, United States District Court, District of New Jersey, Case No. 15-cv-2595 (reports and deposition testimony).

- *Regents of the University of California v. Aon Hewitt et al.*, Superior Court of California, County of Alameda, Case No. RG13697596 (deposition testimony).

- *Cambie Surgeries Corporation v. Medical Services Commission of British Columbia et al.*, Supreme Court of British Columbia, Vancouver Registry, Case No. S090663 (reports and trial testimony).

- *In re: Bay Area Surgical Management v. Aetna et al.*, Superior Court of California, County of Santa Clara, Case No. 1-12-cv-217943 (deposition and trial testimony).

- *State Compensation Insurance Fund v. Sana Ullah Khan et al.*, United States District Court, Central District of California, Southern Division, Case No. SA-cv12-01072 (reports and deposition testimony).

- *In re Examworks Group Inc. Shareholder Appraisal Litigation*, Court of Chancery, State of Delaware, No. 12688-VCL (reports and deposition testimony).

5. My billing rate in this matter is $750 per hour, which is my standard rate. My compensation is not dependent on the content of my testimony or on the outcome of this case.

II. SCOPE OF ASSIGNMENT AND SUMMARY OF OPINIONS

6. Counsel for Optum and Aetna asked me (a) to evaluate and respond to the expert report of Dr. Constantijn Panis, and (b) to evaluate, from an economic perspective, whether injury and damages can be determined on a class-wide basis or, alternatively, whether an individualized inquiry would be required to determine whether any particular member(s) of the putative class suffered injury or damages.

7. In ¶¶ 62 and 63 of her Complaint, Plaintiff offers two proposed classes: (1) "All self-funded plans who, from six years prior to the date of the filing of this action to its final termination … retained Aetna to serve as their claims administrator and paid administrative fees to [Optum]," and (2) "All Aetna insureds who, from six years prior to the date of the filing of this action to its final termination … paid administrative fees to [Optum]."

8. Dr. Panis's report is seriously flawed for two overarching reasons, which I will describe in detail.

9. First, Dr. Panis's "but-for" world—the baseline against which he purports to determine whether Plans and Participants were allegedly "overcharged"—is not valid for the purpose of determining whether any members of the putative classes were harmed. Dr. Panis never explicitly defines in his report the "but-for" world on which he relies. In his deposition, he first testified that the appropriate but-for world would be "an alternative world in which there had been no agreements between Optum and Aetna,"[1] but then later testified that it was a world based on the rates negotiated between Optum and its Downstream Providers.[2] In what follows, I refer to these as the "Optum Downstream" rates.

[1] Dr. Panis Tr. 211:18-22.
[2] Dr. Panis Tr. 218:13-22.

10. The initial step in a proper economic analysis of injury and damages is to define the but-for world against which to compare the economic conditions in the actual world. Such a comparison is necessary to determine whether the challenged conduct caused injury and, if so, the extent of that injury. Instead of defining the but-for world based on economic principles, Dr. Panis assumes at the instruction of Plaintiff's counsel that all payments above the Optum Downstream rate with Optum's Downstream Providers are "overcharges." Consistent with his latter deposition testimony, his assumption implies that, in the but-for world, Aetna Plans and Participants would obtain the Optum Downstream rates.

11. But (as I explain in detail below) there is no plausible but-for world in which Aetna Plans and Participants would obtain the Optum Downstream rates without paying any additional amounts to Optum for the use of its Network and its other services. Based on economic principles and my review of testimony and documents in this case, as well as Plaintiff's allegations, I conclude that the appropriate but-for world is a world without the challenged Aetna-Optum agreements (the "Agreements"). In that situation, Aetna Plans and Participants would obtain Aetna's pre-Agreement rates. Because Aetna's pre-Agreement rates differ from the Optum Downstream rates, Dr. Panis's calculated "overcharges" are not a valid assessment of injury or damages. Indeed, as I discuss in Section VI below, the Agreement benefited Plans and Participants as compared to the correct but-for world.

12. Second, I conclude that, from an economic perspective, injury and damages from the challenged conduct cannot be assessed on a class-wide basis. Even in Dr. Panis's incorrect but-for world, I demonstrate that many putative class members benefited from the challenged conduct—*including the named Plaintiff, Ms. Peters*—in the form of lower Participant Responsibility (both on a per-claim basis and a total basis) than they would have incurred in the absence of the challenged conduct. Inasmuch as any members of the putative class incurred greater Responsibility because of the challenged conduct, a member-by-member analysis would be required to identify them.

III. BACKGROUND ON HEALTH INSURANCE

13. Health insurance provides people with financial protection against the costs of medical care. Illness is unpredictable, and when people get sick, the costs of medical care may be substantial. Insurance allows people to avoid the uncertainty associated with the possibility of a large, potentially unaffordable future liability of this sort, and so people are willing to pay more for insurance than their expected costs of care at any point in time.

14. Most people under the age of 65 obtain their health insurance ("Plan") through their or a family member's employer.[3] Such individuals are described as "Participants" in the Plan. Both Plans and Participants generally bear some Responsibility for the costs of medical services covered by the Plan ("Covered Services"). Participant Responsibility can take several forms:[4]

- "Deductibles" are fixed amounts (e.g., $500) that a Participant must pay for Covered Services before the Plan becomes Responsible.

- "Coinsurance" is the share of the cost of Covered Services (e.g., 20%) that a Participant must pay after she has met the Deductible; the Plan is Responsible for the remainder.

- "Copayments" are fixed amounts (e.g., $20) that a Participant must pay for Covered Services; the Plan is Responsible for the remainder.

- All forms of Participant Responsibility are often capped at a fixed dollar amount (e.g., $5,000), which is known as the "Out-of-pocket Maximum."

15. Employers "Sponsor" Plans in one of two ways. Some purchase Fully-insured Plans, whereby an Insurer accepts the risk of Plan Responsibility and the costs of operating the Plan in exchange for a fixed, upfront payment. This fixed upfront payment is known as the "Premium."

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[3] In 2016, for example, 49% of Americans obtained insurance through an employer, compared with 7% with non-group private insurance, and 35% with Medicare, Medicaid, or other public insurance. See Kaiser Family Foundation, Health Insurance Coverage of the Total Population, https://www.kff.org/other/state-indicator/total-population/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D, accessed March 2, 2018.

[4] Healthcare.gov Glossary, https://www.healthcare.gov/glossary/, accessed May 27, 2018.

16. Others, especially large employers, "Self-fund" their plans. In that case, the Sponsor itself accepts the risk of Plan Responsibility and the costs of operating the Plan. Most Self-funded Plan Sponsors hire an "Administrator" to contract with Providers, handle claims processing, and provide other services. For these services, Administrators charge the Plan a fee per Participant per month, per claim, and/or per dollar of claims paid. Although Administrators of Self-funded Plans are often Insurers, they need not be. Although the Sponsor of a Self-funded Plan has no formal Premium that it pays to an Administrator, health policy analysts use the term "Premium" or "Premium-equivalent" to represent the average monthly amount per Participant that the Sponsor pays for the Plan Responsibility plus these costs or fees.

17. Insurers and Administrators contract with clinicians or businesses ("Providers") to supply medical services to Participants. Essentially all Plans in the U.S. operate on a "Network" model, in which an Insurer or Administrator contracts in advance at pre-negotiated, specially-discounted rates with selected Providers who meet its quality standards.[5] From a Provider's perspective, being in a Network has many benefits. In order to control costs and ensure quality of care, Plans give Participants incentives to use Network Providers, which gives the Network Providers greater access to a large pool of Participants. In exchange, Network Providers agree to follow the Insurer's or Administrator's policies, such as maintenance of minimum quality standards, and to accept the rate they negotiated as payment in full for any Covered Services they supply.

18. Networks also benefit Participants. When Participants receive services from a Network Provider, they know that they will have protection against being "Balance Billed"; that is, Participants know that their financial responsibility is limited to an amount based on a rate negotiated by the Insurer or Administrator. Participants also know that Network Providers are held to quality standards and monitored for their compliance with conditions designed to ensure patient safety. Finally, Participants may benefit from lower Participant Responsibility by virtue of pre-negotiated, specially-discounted rates secured by the Insurer or Administrator.

[5] Kaiser Family Foundation/Health Research and Educational Trust, Survey of Employer Health Benefits, 2016, p. 79, Exhibit 5.1.

19. Insurers and Administrators compete with one another to develop Networks that are broad, of high quality, and of low cost. Sponsors select an Insurer or Administrator through a process in which they solicit bids that specify the Premium and expected Participant Responsibility, and evaluate their Insurer or Administrator retrospectively on their deviation (if any) from their bid.

20. One of the key inputs to Sponsors' decisions is the rates that the Insurer or Administrator has negotiated with its Network Providers. The impact of these rates on the Premium and Participant Responsibility dwarfs the Plan's operating costs or any profits that an Insurer or Administrator might earn. Figure 1 shows that, in 2015, Plan Responsibility to Providers in the U.S. overall made up 88¢ of each dollar of Premiums; the costs of operating the Plans made up 9¢, and profits earned by Insurers and Administrators made up 3¢.

Figure 1: The U.S. Health Insurance Premium Dollar, 2015

Sources: Payments for services and net cost of insurance proportions from https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsHistorical.html. Sherlock Benchmark Administrative Cost Values of Larger Health Plans – 2016 Metrics, Appendix B (Early August Navigator 2017). Profits are the residual share; see https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/index.html, quickref.pdf.

21. Accordingly, all other things being equal, a lower-cost Network affords an Insurer or Administrator with a competitive benefit in seeking to win business from Sponsors. Insurers and Administrators use multiple strategies to develop low-cost Networks and thereby maximize their appeal. Insurers and Administrators may contract with individual clinicians directly. In

addition, they may contract with Third-party Organizations that employ or contract with clinicians, such as group practices, Independent Practice Associations (IPAs), and other legal entities.[6] Health policy analysts consider both individual clinicians and Third-party Organizations that employ or contract with clinicians to be Providers.[7]

22. Third-party Organizations may be separate from individual clinicians, and may be owned by clinicians, hospitals, outside investors, or some combination. Third-party Organizations may provide services in addition to treating patients, such as Utilization Review and Provider Relations.[8] Insurers' and Administrators' compensation of Third-party Organizations and other Providers for these non-clinical services may be folded into their clinical services' rates.

23. Providers of outpatient services generally bill for the services they provide to Participants according to the Healthcare Common Procedure Coding System, or HCPCS. HCPCS is a set of approximately 6,500 codes describing medical services and products. HCPCS codes include both Current Procedural Terminology (CPT) codes ("Level I HCPCS codes") and other ("Level II HCPCS") codes that are used primarily to identify products and services that do not have a CPT code.

24. Insurers and Administrators pay Providers in different ways. Traditionally, Insurers and Administrators paid Providers on a "Fee-for-service" basis, under which Providers received a separate payment for each medical service they delivered. Increasingly, however, Insurers and Administrators seek to pay Providers on a "Value-based Payment" basis. Value-based Payment is a tool to create incentives to Providers to deliver higher-quality care at lower cost (such as by engaging in Utilization Review). Value-based Payment differs from Fee-for-service by basing

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[6] An IPA, for example, is "an organization providing health care by doctors who maintain their own offices and continue to see their own patients but agree to treat enrolled members of the organization for a negotiated lump sum payment or a fixed payment per member or per service provided." See Merriam-Webster Medical Dictionary, https://www.merriam-webster.com/medical/independent practice association, accessed May 27, 2018.

[7] See, for example, Mosby's Medical Dictionary (8th ed. 2009) (health care provider: any individual, institution, or agency that provides health services to health care consumers) or the Stedman's Medical Dictionary for the Health Professions and Nursing (2012) (health care provider: general term for any institution or member of the health care team providing health care).

[8] Utilization Review, for example, is "the critical evaluation (as by a physician or nurse) of health-care services provided to patients especially for the purpose of controlling costs … and monitoring the quality of care." See Merriam-Webster Medical Dictionary, https://www.merriam-webster.com/medical/utilization review, accessed May 27, 2018.

Provider payments on something other than the volume of services. The Centers for Medicare and Medicaid Services, the division of the U.S. Department of Health and Human Services that administers Medicare and Medicaid, has promoted and currently promotes several Value-based Payment programs as a matter of public policy.[9]

25. One type of Value-based Payment is "Bundled Payment." A Bundled Payment compensates Providers with a single payment for all services related to a specific treatment, condition, or date of service. A Bundled Payment creates incentives for Providers to eliminate unnecessary services and reduce costs by no longer rewarding them for delivering a greater volume of services without regard to the benefit they yield.

26. When paying a Provider by Bundled Payment, Insurers and Administrators may request that Providers bill them using HCPCS codes that do not specifically enumerate all of the services that the bundle may include. For example, some Insurers and Administrators pay urgent care centers with a single payment for a given Participant visit. When they do, they may use HCPCS code S9083 ("Global fee urgent care centers") even when other services may have been delivered.[10]

IV. BACKGROUND ON THE CASE

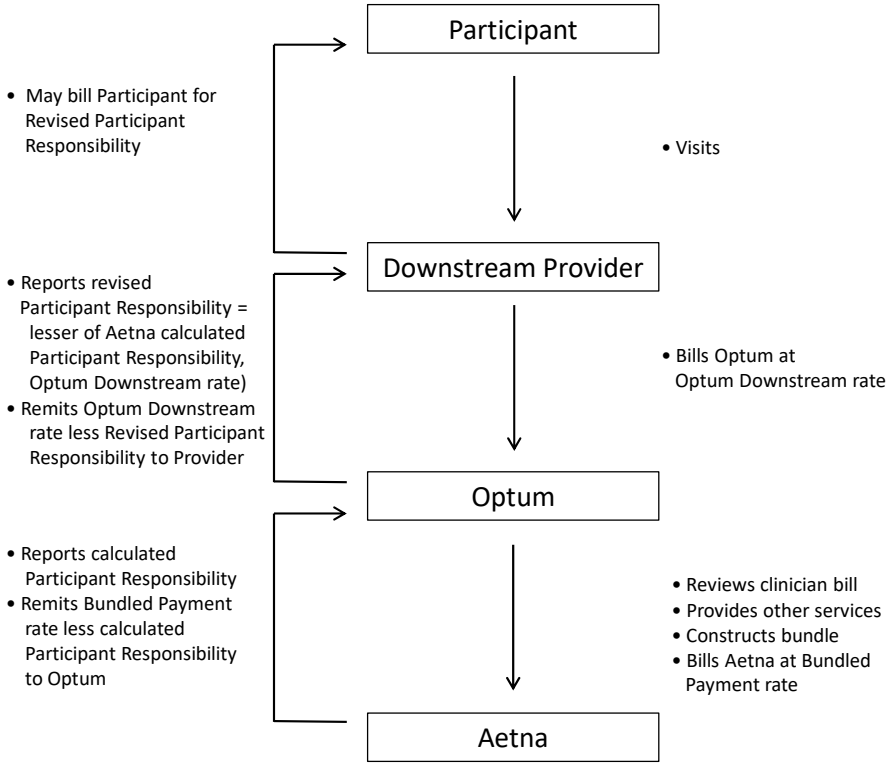
27. In April 2012, Optum agreed with Aetna to provide physical therapy and occupational therapy services (later expanded through a separate contract to include chiropractic services) to Aetna Participants through Optum's Network. Optum also agreed to provide other services to Aetna, such as Utilization Review, Provider Relations, and measurement of patient satisfaction.

28. Figure 2 shows the typical and contemplated flows of services, information, and funds underlying this matter. An encounter begins with a Participant visiting a Downstream Provider in the Optum Network. After delivering services, the Downstream Provider bills Optum according to the Optum Downstream rates. Optum reviews the Downstream Provider's bill, may

[9] https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/Value-Based-Programs.html, accessed May 27, 2018.
[10] See, for example, Journal of Urgent Care Medicine, S Codes In Urgent Care, https://www.jucm.com/s-codes-s9088-s9083-urgent-care, accessed June 1, 2018.

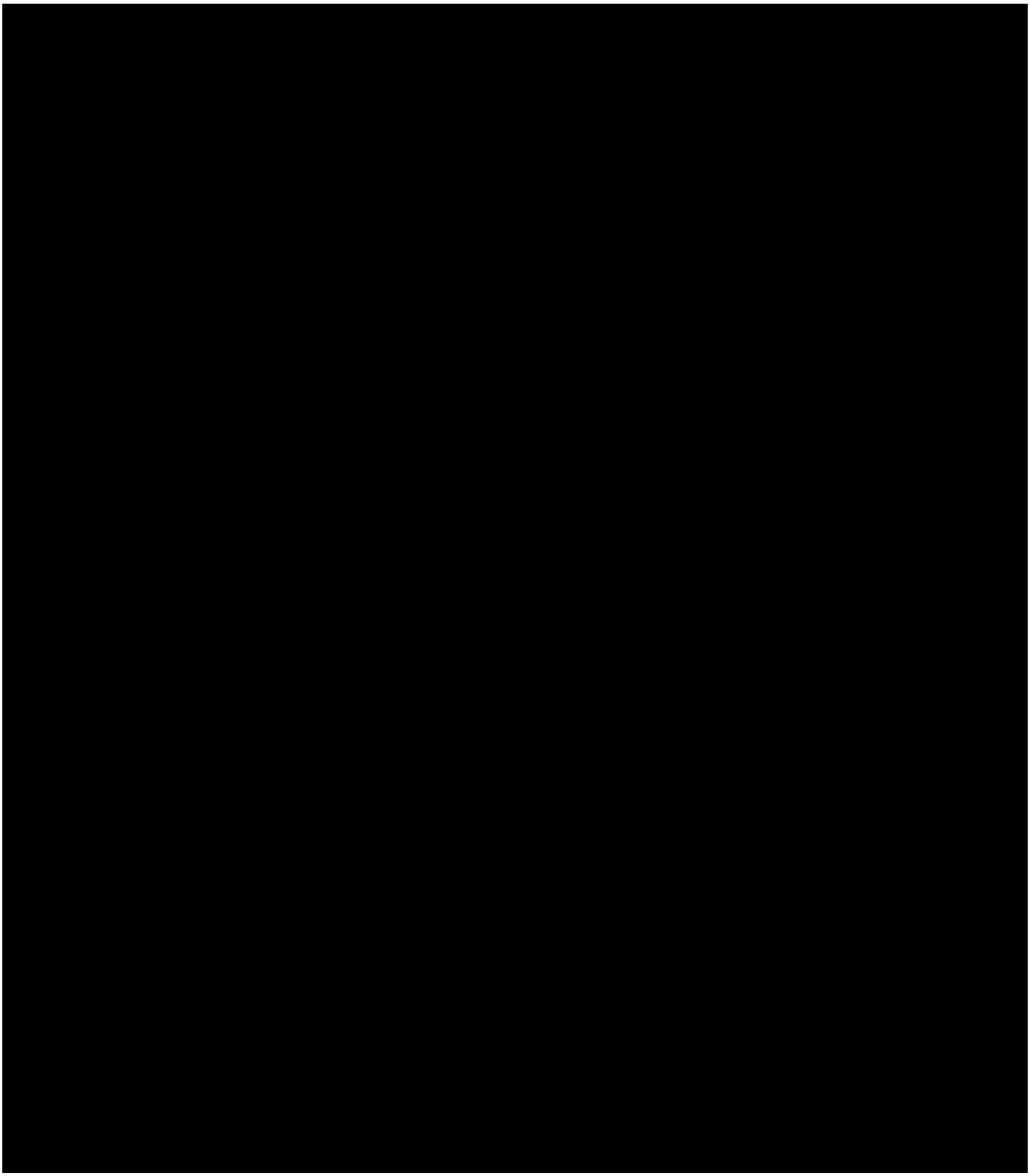
supply other services, and constructs a service bundle for which it bills Aetna at a Bundled Payment rate (the "Aetna Bundled Payment rate").

Figure 2: Flows of Services, Information, and Funds



29. After receiving a bill from Optum, Aetna calculates the Participant Responsibility based on the Aetna Bundled Payment rate. It credits that amount toward the Participant's Deductible and Out-of-pocket Maximum as appropriate, reports it to Optum, and remits payment to Optum equal to the Aetna Bundled Payment rate less the calculated Participant Responsibility.

30. After receiving this information and (if applicable) payment from Aetna, Optum relays to the Downstream Provider Aetna's calculation of the Participant's financial responsibility and Aetna's instructions that she may bill the Participant a revised Participant Responsibility equal to the smaller of Aetna's calculated Participant Responsibility and the Optum Downstream rate. Optum also remits payment to the Downstream Provider equal to the Optum Downstream rate less the revised Participant Responsibility.



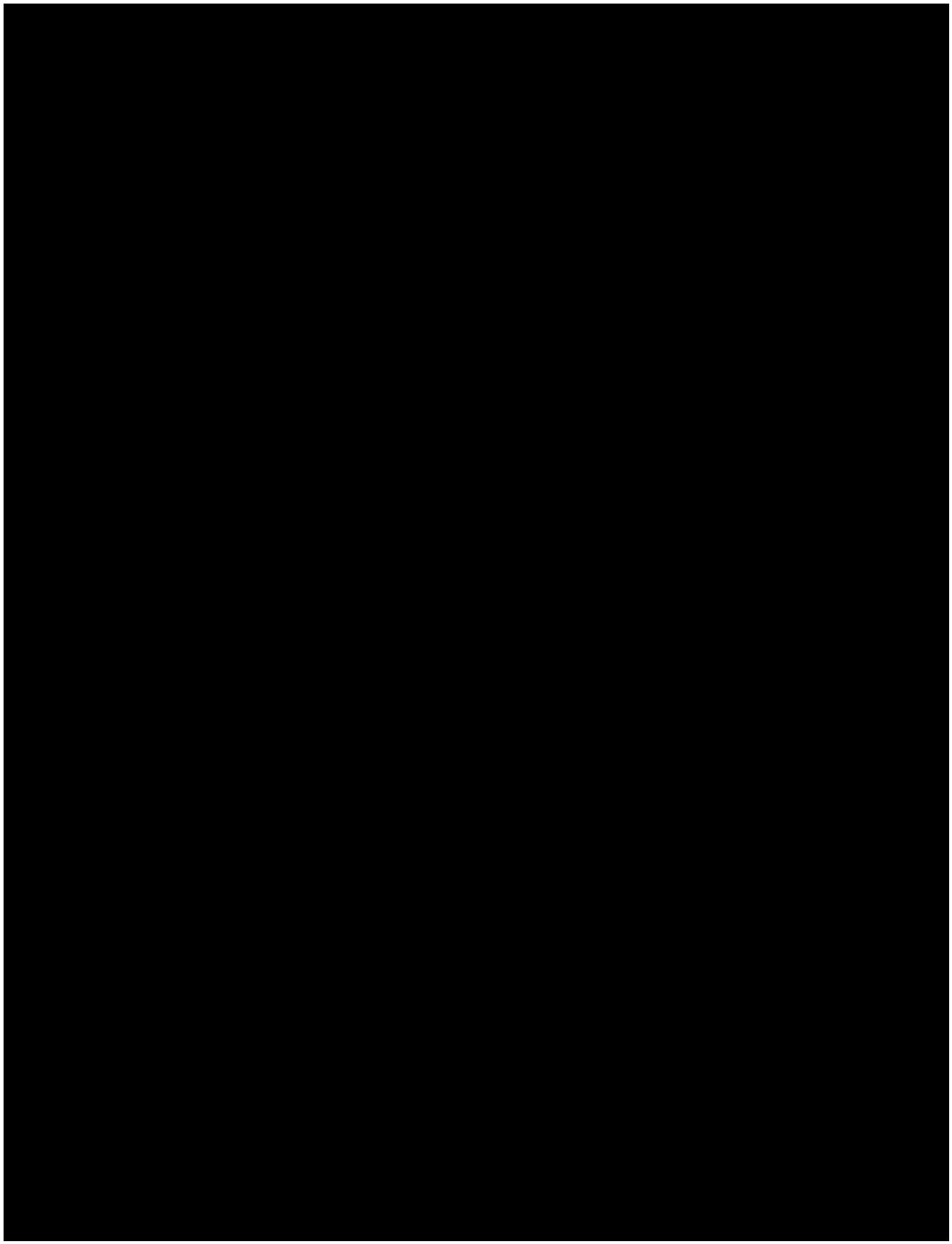
33. This process is common in the industry. As discussed above, Insurers and Administrators seek to pay Providers using forms of Value-based Payment, such as a Bundled Payment, in order to create incentives for Providers to deliver services efficiently—ultimately for the benefit of

Participants and Sponsors. To accomplish this goal, Insurers and Administrators may contract with Third-party Organizations that employ or contract with clinicians. Such Third-party Organizations are widespread and generally accepted, including IPAs consisting only of chiropractors.[11] These Third-party Organizations must incorporate their costs into their rates; otherwise, they could not exist. Insurers' and Administrators' compensation of Third-party Organizations for the non-clinical services they deliver may be folded into their rates. Third-party Organizations do not always offer Plans and clinicians exactly the same payment methodology; many IPAs, for example, accept Value-based Payments from Insurers or Administrators and pay their contracted physicians on a Fee-for-service basis.[12] Because of this, contracts between Third-party Organizations and Insurers or Administrators will inevitably sometimes characterize at least some of the cost of non-clinical services as spending on medical services.

34. These Third-party Organizations play a similar role to the one that Optum did in the Agreements. In the example above, Optum received the bill from the Downstream Provider; constructed the bundle; and delivered services such as Utilization Review and Provider Relations. [redacted]

35. In some cases, the Aetna Bundled Payment rate was lower than the Optum Downstream rate—even including Optum's fees. Dr. Panis ignores these cases; as I discuss in detail below, this is just one reason among many why his analysis fails to reliably characterize the consequences of the Agreements for Plans and Participants.

[11] See, for example, https://www.securecarecorp.com/why-securecare/, accessed May 27, 2018.
[12] James C. Robinson et al., The Alignment and Blending of Payment Incentives within Physician Organizations, Health Services Research 2004:39(5), p. 1589-1606, at 1593, 1597-98.



38. The fact that the Aetna Bundled Payment rate (i.e., the rate charged by Optum to Aetna) was in some cases greater than the Optum Downstream rate does not establish that Participants or Plans were "harmed" by the Agreements in any meaningful or material way. Rather, it simply indicates that Optum was compensated for its services, including the use of its Network. As I discuss in detail below, to consider the Optum Downstream rates to be the but-for world in this case (as Dr. Panis does, at the instruction of Plaintiff's counsel) has no economic basis, because it assumes that Optum would supply valuable services for free or that Aetna would pay Optum's fees without in turn charging Aetna's Plans or Participants for those costs. In addition, as I show above, Bundled Payment systems sometimes *reduce* Plan and Participant Responsibility, even including the compensation to a Third-party Organization necessary to administer the Bundled Payment system. Bundled Payment and associated techniques to enhance efficiency, even when they entail compensation to a Third-party Organization such as Optum, are economically rational for an Insurer or Administrator such as Aetna and are beneficial to Plans and Participants, as long as they save money for Plans and Participants as a whole as compared to the relevant but-for world; if they do, then they deliver aggregate economic benefits.

39. Plaintiff's counsel instructed Dr. Panis to identify claims where "the combined responsibility of the plan and the member was equal to the Aetna-allowed amount and exceeded the provider-allowed amount."[13] In the terms that I use, Dr. Panis identifies claims where the sum of Plan and Participant Responsibility was equal to the Aetna Bundled Payment rate and greater than the Optum Downstream rate. [redacted].[14]

40. [redacted].[15] He allocates each claim's so-called

[13] Dr. Panis report, ¶ 39.
[14] Dr. Panis report, ¶ 39; see also Dr. Panis Tr. 130:6-132:14. I understand that Dr. Panis excluded these claims "[f]airly late in the process" because Plaintiff's counsel told him "to focus on this 70.6 percent only at some point." Dr. Panis Tr. 135:9-13.
[15] Dr. Panis report, ¶ 41.

"overcharge" between Plans and Participants as follows: "(1) If the member was responsible for a copayment and the plan for the remainder, the entire overcharge was borne by the plan. (2) Otherwise, I assume that the plan and the members were overcharged in proportion to their responsibility of the Aetna-allowed amount."[16]

41. [redacted]

42. I understand from counsel that (a) Plaintiff alleges, among other things, that the Agreements between Aetna and Optum to provide the services discussed above according to a Bundled Payment schedule that includes an "administrative fee" that is charged on a per-claim basis caused her and other class members injury and damages; (b) Plaintiff maintains that she can adequately represent the interests of other Participants (including those who are not in her Plan), the Sponsor of her Plan, and the Sponsors of other Plans; and (c) Plaintiff maintains that, as a Participant in a self-funded Plan Administered by Aetna, her claims are typical of the claims of the other Participants, of the Sponsor of her Plan, and of the Sponsors of other Plans.

V. DR. PANIS'S "OVERCHARGES" DO NOT PROVIDE A VALID ASSESSMENT OF INJURY OR DAMAGES BECAUSE HIS IMPLICIT BUT-FOR WORLD IS INCORRECT

43. The initial step in a proper economic analysis of injury and damages is to define the but-for world that would have obtained in the absence of the alleged wrongdoing in order to specify the baseline against which to compare the economic conditions in the actual world. From an economic perspective, such a comparison is necessary to determine whether the alleged wrongdoing caused injury, and if so, the extent of that injury. If the economic conditions in the

[16] Dr. Panis report, ¶ 42.
[17] Dr. Panis report, ¶¶ 43-44.
[18] Dr. Panis report, ¶ 37.
[19] Dr. Panis report, ¶ 37, footnote 4.

actual world were equal to or better for the plaintiff than those in the but-for world, then no injury could have occurred. As a result, determining either the existence or magnitude of economic harm depends crucially on the specification of the but-for world.

44. For two reasons, I conclude that the correct but-for world for determining harm and quantifying damages in this matter is one in which Plan and Participant Responsibility was based on the rates for physical therapy, occupational therapy, and chiropractic services that were in effect for Aetna before the Agreements, and Aetna did not receive the Utilization Review and other services delivered by Optum. I refer to these rates as the "Aetna Pre-Agreement rates."

45. First, if the Agreements themselves were impermissible, then the but-for world would be one in which the Agreements did not exist. If the Agreements did not exist, then Plan and Participant Responsibility would be based on the Aetna Pre-Agreement rates.

46. Second, if the Agreements themselves were permissible but Defendants' alleged misrepresentations of the Agreements were impermissible, then the but-for world would be one in which the alleged misrepresentations did not occur. If this were true, Plaintiff could have been injured only if the alleged misrepresentations led Sponsors to have accepted the terms of the Agreements when they would otherwise have declined them. That is, if a Sponsor would have accepted the terms of the Agreements even with the disclosures Plaintiff claims should have been made, then there is no economic injury because the financial situation would be the same. But if a Sponsor did decline to accept the terms of the Agreements, then it would have paid the Aetna Pre-Agreement rates, just as it would have had the Agreements not existed.

47. By contrast, Dr. Panis evaluates (at the instruction of Plaintiff's counsel) a but-for world in which Plans and Participants would have obtained the Optum Downstream rates, without any additional cost for Optum's services. His implicit assumption about the relevant but-for world makes no economic sense. Using the wrong but-for world renders his "overcharges" invalid as a basis for determining injury or quantifying damages.

48. According to his own testimony, Dr. Panis's "overcharges" also do not provide a valid assessment of Optum's gain or profit (if any). [redacted]

[redacted] He agreed that Optum's profit (if any) would be less than the "gain" that he calculated after accounting for such costs.[21]

49. Dr. Panis's implicit but-for world is inconsistent with basic economics. A but-for world in which Plans and Participants obtained the Optum Downstream rates (without any additional costs, fees, or Premiums) would require either (a) Optum to have offered use of its Network and other services to Aetna for free, or (b) Aetna to have paid Optum's fees without in turn charging its Plans and Participants for those costs. Neither of these situations makes economic sense. Optum's Network and services required investment to develop and ongoing resources to maintain and operate; it therefore would make no economic sense for Optum to give away these services to third parties for free. And for Aetna to be willing to pay Optum's fees itself, Aetna itself would have to benefit by at least as much as it paid Optum. Dr. Panis provides no evidence that this was the case. His failure to provide such evidence is not surprising. As I discuss in detail below, Aetna's evaluations of the Agreements examined the Agreements' benefits in terms of reduced Plan and Participant Responsibility. Aetna also viewed Optum's services as "enhanced" services over and above those that Aetna was already delivering.[22] I am aware of no evidence that the Agreements benefited Aetna over and above their effect on Plan and Participant Responsibility, for example by significantly reducing Aetna's costs of delivering Administrative services that it was already delivering or would have delivered in the absence of the Agreements.

50. My conclusion that Dr. Panis's implicit but-for world makes no economic sense does not depend on the specific form through which Aetna recovered the fees it paid to Optum. Even if Optum had not charged for its services on a per-claim basis, and it were possible to structure the payment some other way, it is reasonable to expect that Optum would have charged Aetna approximately the same amount for Optum's services in some way—for example, on a per-Participant-per-month basis. And it is reasonable to expect that Aetna would have passed this cost on to Plans and Participants, as opposed to absorbing this cost itself.

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[20] See, for example, Dr. Panis Tr. 116:2-7 (Q: "So Optum—not all of the amounts paid to Optum would have gone to Optum's bottom line, correct?" A: "Correct. And Optum provided services that were useful."); Dr. Panis Tr. 115:19-23 (Q: "Now, you acknowledged a few minutes ago that some of the amounts paid to Optum would have been used for Optum's costs and expenses, correct?" A: "Sure.").
[21] Dr. Panis Tr. 118:5-14.
[22] Aetna 30(b)(6) Tr. 50:17-24.

51. My conclusion that Dr. Panis's implicit but-for world makes no economic sense also does not depend on the absence of savings that Aetna may have achieved from the Agreements beyond reductions in Plan and Participant Responsibility. First, there is no evidence that Aetna achieved any such savings. According to Ms. Jennifer Cross Hennigan, currently a Senior Director at Aetna (and its corporate designee to testify about the challenged Agreements), Aetna never evaluated or considered any such savings.[23]

52. But even if there were such savings, they would not have been nearly large enough to justify Dr. Panis's implicit but-for world. [redacted] Thus, even if all such savings were truly realized by Aetna—which is economically implausible, given that Aetna never considered or evaluated such savings in its own assessment of the Agreements' value—it would not have been sufficient to enable Aetna to offer Participants and Plans the Optum Downstream rates (without any additional fees or Premiums) without losing money.

53. Assuming a but-for world in which Participants and Plans obtained the Optum Downstream rates (without any additional fees or Premiums) also violates the standard requirement that the but-for world differs from what actually happened only with respect to the allegedly harmful act,[28] unless the fee itself would not be charged.

54. But there is no economic basis for concluding that Optum would not charge Aetna any fees for its services. As discussed above, Optum's role in the Agreements is similar to that of a wide range of Third-party Organizations that are common in the industry and acknowledged to be in Plans' and Participants' overall economic interest.

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[23] Cross Tr. 44:6-22.

[24] [redacted]

[25] Including visits that had a zero allowed amount would only increase my estimate of fees paid to Optum.

[26] See, for example, AETNA-PETERS-00000619-00000851, at -00000691.

[27] [redacted]

[28] Reference Manual on Scientific Evidence 432 (3d edition).

55. In summary, I conclude that Dr. Panis's purported "overcharges" do not provide a valid basis for assessing either injury or damages, because his implicit but-for world could not have occurred. The correct but-for world is one in which Plan Responsibility and Participant Responsibility was based on the rates for physical therapy, occupational therapy, and chiropractic services that were in effect before the Agreements. There is no economic basis to conclude that the correct but-for world is one in which Plans and Participants would have obtained the Optum Downstream rates, without any additional fee or Premium. Yet that is what Dr. Panis implicitly assumes—at Plaintiff's counsel's instruction—in his "overcharge" calculation.

VI. COMPARED TO THE CORRECT BUT-FOR WORLD, THE AETNA-OPTUM AGREEMENTS BENEFITED PLANS AND PARTICIPANTS—BENEFITS THAT DR. PANIS'S "OVERCHARGE" ANALYSIS FAILS TO CONSIDER

56. As discussed in ¶ 19 above, Insurers and Administrators compete with one another on the basis of the quality and cost of their Networks. Sponsors evaluate Insurers and Administrators, both prospectively and retrospectively, in terms of their Premiums and expected or average Plan Responsibility and Participant Responsibility, which are mostly determined by Networks' cost. Aetna also had a direct incentive to minimize the costs of its Network, because Aetna is financially responsible for those costs for its Fully-insured Plans. It was therefore in Aetna's economic interest to evaluate the extent to which Aetna's Networks benefit Plans and Participants as compared to alternative Networks that it might be able to use instead, such as the Optum Network.

57. Aetna acted in accordance with its economic interest, which was aligned with that of Plans and Participants, when it was deciding whether to enter the Agreements. To achieve corporate approval for the Agreements, Aetna management had to explain how the Agreements could benefit Plans and Participants and provide evidence that they would be likely to do so.[29] Optum provided analyses to Aetna promoting the Optum Network as one that would reduce

[29] See, for example, AETNA-PETERS-00015288, AETNA-PETERS-00015290-00015292.

Premiums and Participant Responsibility while preserving or enhancing quality.[30] Aetna both considered Optum's analyses and conducted its own analyses.[31]

[redacted]

[30] See, for example, OPTUM-PETERS-00004181-00004187, OPTUM-PETERS-00004155-00004174.
[31] See, for example, Optum 30(b)(6) Tr. 47:8-17.
[32] AETNA-PETERS-00026201-00026205, at -00026203.

[redacted]

[33] AETNA-PETERS-00006165.
[34] AETNA-PETERS-00041160.
[35] AETNA-PETERS-00012640.
[36] AETNA-PETERS-00067862-00067881, at -00067868, -00067881. [redacted]
[37] Spreadsheet entries do not always correspond exactly to calculations as presented here because of rounding.

[redacted]

64. Based on these analyses, I conclude that the Agreements benefited Plans and Participants on the whole in terms of each of the three financial and quality consequences discussed in ¶ 58. Because enrollment in these areas is disproportionately in Self-funded Plans, and the forecasted savings is proportional to enrollment, these analyses also show that most of the savings benefited Self-funded Plans and their Participants. Appendix C shows the locations in the exhibits on which my conclusions are based.

65. Dr. Panis, however, ignores these benefits of the Agreements, as he compares the Plaintiff's and putative class members' actual economic condition not with the Aetna Pre-Agreement rates, but with the Optum Downstream rates. In doing so, Dr. Panis presents an incorrect picture of the economic impact of the challenged conduct, as he assumes away one of the fundamental economic benefits of the Agreements—that is, the transition from the Aetna

[38] [redacted]

Pre-Agreement to the Bundled Payment rates—which Aetna forecasted to result in millions of dollars in savings for Plans and Participants.

66. To be sure, not every claim by every Downstream Provider had Bundled Payment rates that were lower than the Aetna Pre-Agreement rates. But the aggregate projected savings from moving from the Aetna Pre-Agreement to the Bundled Payment rates indicate that the Agreements would lead to savings on a substantial portion of claims. Dr. Panis has not even attempted to investigate the magnitude of these savings. Instead, at the instruction of Plaintiff's counsel, Dr. Panis wrongly classifies as "overcharged" the many Plans and Participants who likely benefited from the Agreements—highlighting why his "overcharge" analysis does not provide a valid assessment of injury or damages.

VII. EVEN ACCEPTING DR. PANIS'S INCORRECT BUT-FOR WORLD, HE HAS NO METHODOLOGY TO IDENTIFY EITHER WHO WAS ALLEGEDLY HARMED OR DAMAGES

67. Even if one were to accept Dr. Panis's incorrect but-for world, Dr. Panis still identifies no methodology that could reliably identify the Participants or Plans that were purportedly harmed (even under Plaintiff's theory of the case), or the magnitude of any such harm. This is because Dr. Panis's methodology incorrectly ignores claims where Participants and Plans benefited from the Agreements, so he fails to offset alleged "overcharges" with instances in which the *same Participant or Plan* benefited financially (or, in his terms, was "undercharged") as a result of the Agreements.[39] Dr. Panis agreed in his deposition that a class member who was charged less on a particular claim was "undercharged" under his theory,[40] and that "[a]s an economist," he believes that in order to "look at the impact of the Aetna-Optum relationship on a member, you would have to look at that member's *complete* claims experience and the evolution of claims over the course of the year."[41] Dr. Panis, however, did not conduct such an analysis, and therefore he has not offered a methodology that can assess the impact of the Agreements on any Plan or Participant (much less all Plans and Participants in the purported class). Dr. Panis testified that

[39] Dr. Panis's failure to offset instances in which he alleges a Participant or Plan suffered harm with instances in which the same Participant or Plan benefited financially from the Agreements was not dictated by the available data. The Optum claims contained a unique Participant identifier that would have enabled him to conduct this analysis.
[40] Dr. Panis Tr. 100:3-15.
[41] Dr. Panis Tr. 174:24-175:9 (emphasis added).

"the exclusion of these claims … was not based on [his] analysis as an economist that it made sense to do it that way."[42] Rather, I understand from his deposition that he "didn't offset them because plaintiff's counsel directed [him] not to."[43] I agree with Dr. Panis that one cannot know how many of the putative class members he identifies in his report "were actually injured by Aetna-Optum practices that the plaintiff is challenging" without an individualized and detailed examination that looks across multiple claims at a member's experience.[44]

68. As I show below, many Plans and Participants that actually benefited from the Agreements—even as compared to Dr. Panis's incorrect and implausible but-for world—are incorrectly classified by Dr. Panis's "overcharge" calculation as having suffered injury. Thus, Dr. Panis's "overcharge" calculation does not and cannot distinguish Plans or Participants that suffered a purported injury from those that actually benefited from the challenged conduct. As I show below, to make such a determination would require detailed individualized inquiry, and Dr. Panis has identified no methodology to do this on a class-wide basis.

69. For a simple example of that flaw, consider a Participant who (a) had one claim where the Bundled Payment rate was greater than the Optum Downstream rate (and therefore had a Panis "overcharge"), but (b) also had a claim where the Bundled Payment rate was less than the Optum Downstream rate (and therefore had a financial benefit). Dr. Panis simply ignored the claims for which the Participant benefited, and based on this incomplete analysis would claim that this Participant was "overcharged." But to determine the actual impact of the challenged conduct on this Participant, one would need to consider both (a) claims where the Participant Responsibility was based on lower rates and (b) claims where the Participant Responsibility was based on higher rates. Dr. Panis failed to conduct such an analysis.

70. Figure 3 summarizes the claim history of an actual Participant who had exactly such circumstances; the full detail of this Participant's claim history is in Appendix D, in which all of the dollar values that follow can be found. As I explain in detail below, Figure 3 shows whether (and by how much) the Participant Responsibility would have been higher or lower on each

[42] Dr. Panis Tr. 154:3-7.
[43] Dr. Panis Tr. 150:16-19.
[44] Dr. Panis Tr. 165:23-166:14.

claim—including those that Dr. Panis ignores—in the actual world as compared to Dr. Panis's but-for world.

[redacted]

[45] Dr. Panis did not produce with his report a claim-by-claim breakdown of his evaluation of putative class members' claims for benefits. I describe his determinations in my report based on application of the principles he identifies in his report to the claim data.

72. Based on the instruction of Plaintiff's counsel, Dr. Panis ignored claims 1, 3, and 4 in his analysis. In each of these claims the Participant was *better off* in the actual world than she would be in the Panis but-for world because the Bundled Payment rate charged to Aetna was lower than the Optum Downstream rate. But instead of netting these benefits against the supposed harms, he simply ignored the benefits. Specifically, as compared to his but-for world, each of claims 1, 3, and 4 incurred a financial benefit, because the Participant Responsibility was actually less than it would be, based on the Optum Downstream rates. [redacted]

73. Even as compared to Dr. Panis's (incorrect) but-for world, this Participant actually benefited from the Agreements. And yet, because he simply ignored the claims for which the Participant benefited, Dr. Panis would erroneously classify this Participant as having suffered an "overcharge."

74. In evaluating the impact of the challenged conduct, there is no economic basis for ignoring almost 30% of the claims, as Dr. Panis has done. To assess the economic impact of the challenged conduct on this Participant—even as compared to Dr. Panis's incorrect but-for world—it is necessary to consider the claims for which the Participant benefited as well as those for which they were allegedly harmed. Otherwise, a Participant who benefited from the Agreements—as was the case in this actual example—would be incorrectly classified as having been harmed. Likewise, determining the impact on Plans would require conducting a similar analysis many times over.

VIII. EVEN ACCEPTING DR. PANIS'S INCORRECT BUT-FOR WORLD, TO CORRECTLY IDENTIFY WHO WAS HARMED AND BY HOW MUCH WOULD REQUIRE INDIVIDUALIZED INQUIRY

75. As the example above shows, even accepting Dr. Panis's (incorrect) but-for world, he does not correctly identify which Participants were allegedly "overcharged" or the amount by which they were "overcharged." The example shows that to determine correctly that this Participant was not harmed would require a claim-by-claim analysis at the level of an individual Participant—analysis that Dr. Panis failed to do. The need for individualized inquiry, however, extends far beyond simply accounting for claims (which Dr. Panis ignored) where the Bundled Payment rate was less than the Optum Downstream rate.

76. First, whether a Participant actually suffered injury depends on the amount of Coinsurance Responsibility that the Participant's particular Downstream Provider actually collected from Participants, a factor that varies among Providers and among Participants. As compared to any but-for world, if the Downstream Provider did not collect or pursue payment of any "overcharge" from the Participant, then the Participant cannot have suffered any injury. An individual inquiry is necessary to assess this issue.

77. Both Ms. Peters and Dr. Panis acknowledge that some Providers do not collect all amounts of Participant Responsibility. [redacted] Determining which amounts she actually paid was complex and individualized, even after months of discovery. According to Dr. Panis, "[q]uite likely, there were some [situations] where the provider did not send a bill or did not collect on it."[47] Dr. Panis agrees that, in cases in which this occurred, the Participant would not have been "overcharged," even according to his own definition.[48] But as Dr. Panis testified, he failed to conduct any analysis of how much in Coinsurance Responsibility Downstream Providers actually collected.[49] He acknowledged that to do so, one would need to review the

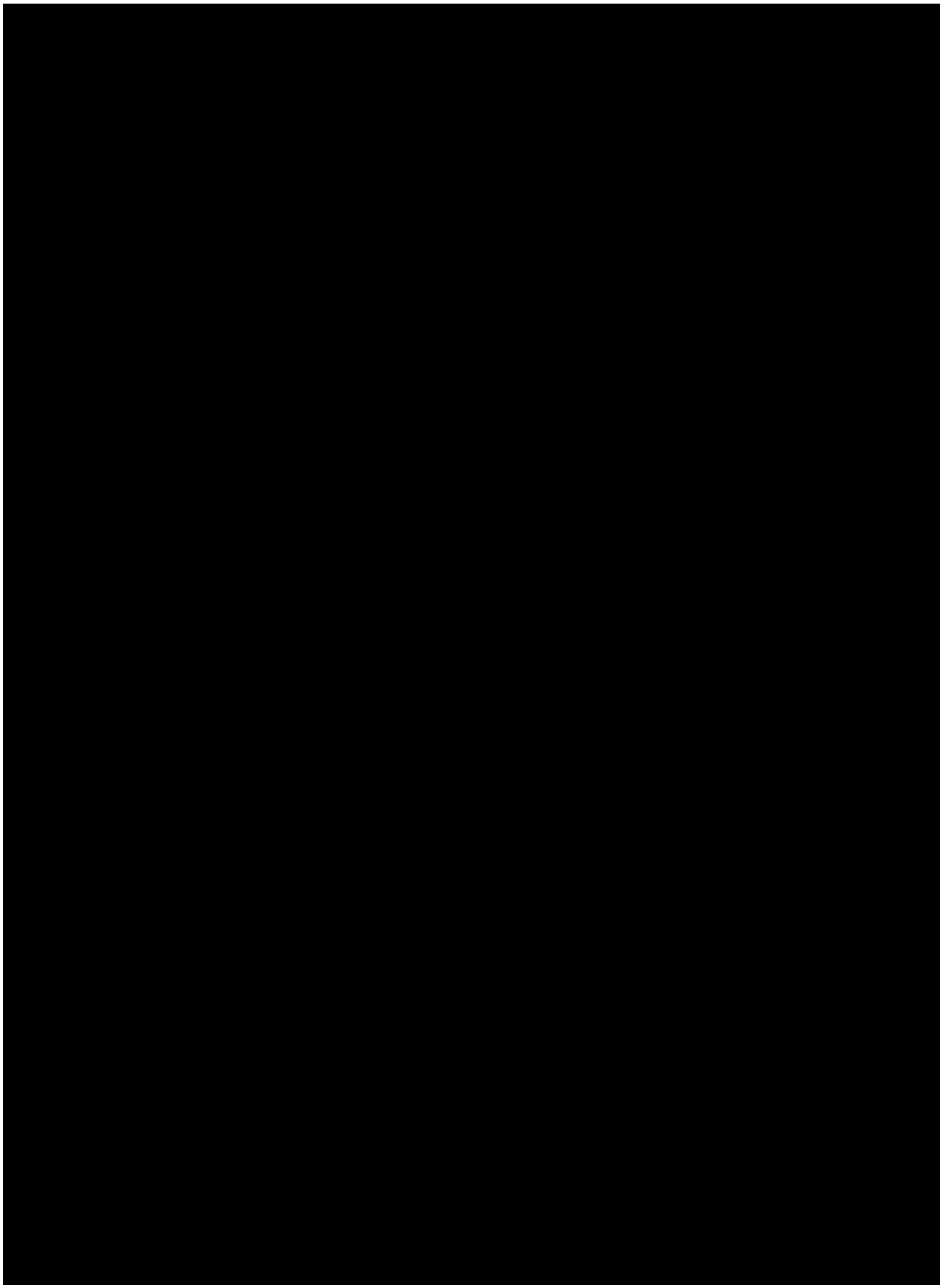
[46] Peters Tr. 144:16-145:1.
[47] Dr. Panis Tr. 102:11-15.
[48] Dr. Panis Tr. 228:17-23.
[49] Dr. Panis Tr. 229:24-230:3.

various interactions between Providers and Participants[50]—a review that would require individualized inquiry.

78. Second, Participant Responsibility on one claim may depend on Participant and Plan Responsibility on previous claims. As Dr. Panis agreed in his deposition, "you would have to look at" all of a member's claims together "to figure out the complete picture for a particular member."[51] Indeed, as I show in detail below, because of the impact of Plan terms such as the Deductible and Out-of-pocket Maximum, the impact of the challenged conduct on any particular Participant or claim can only be assessed through a detailed analysis of an individual Participant's claims history. Thus it is not possible to calculate what Participant (or Plan) Responsibility on a claim would have been in *any* but-for world—including Dr. Panis's (incorrect) but-for world—without considering *all* of a Participant's previous claims in the but-for world in that Plan year as well.

79. Consider a Participant with claims that had both Deductible and Coinsurance Responsibility. Figure 4 summarizes the claim history of an actual Participant that illustrates this point; the full detail of this Participant's claim history is in Appendix E, in which all of the dollar values that follow can be found. In both the actual world and Dr. Panis's but-for world, the Figure shows that the Participant incurred only Deductible Responsibility on claims 1 through 8. In the actual world, for each of these claims, the Participant owed the lesser of the Optum Downstream rate and the Participant Responsibility based on the Aetna Bundled Payment rate; in Dr. Panis's but-for world, the Participant would owe the Optum Downstream rate. Because for all of this Participant's claims the Optum Downstream rate was less than the Participant Responsibility based on the Aetna Bundled Payment rate, in both the actual world and Dr. Panis's but-for world, the Participant Responsibility was based exclusively on the Optum Downstream rate, [redacted]

[50] Dr. Panis Tr. 229:11-15
[51] Dr. Panis Tr. 139:11-19.

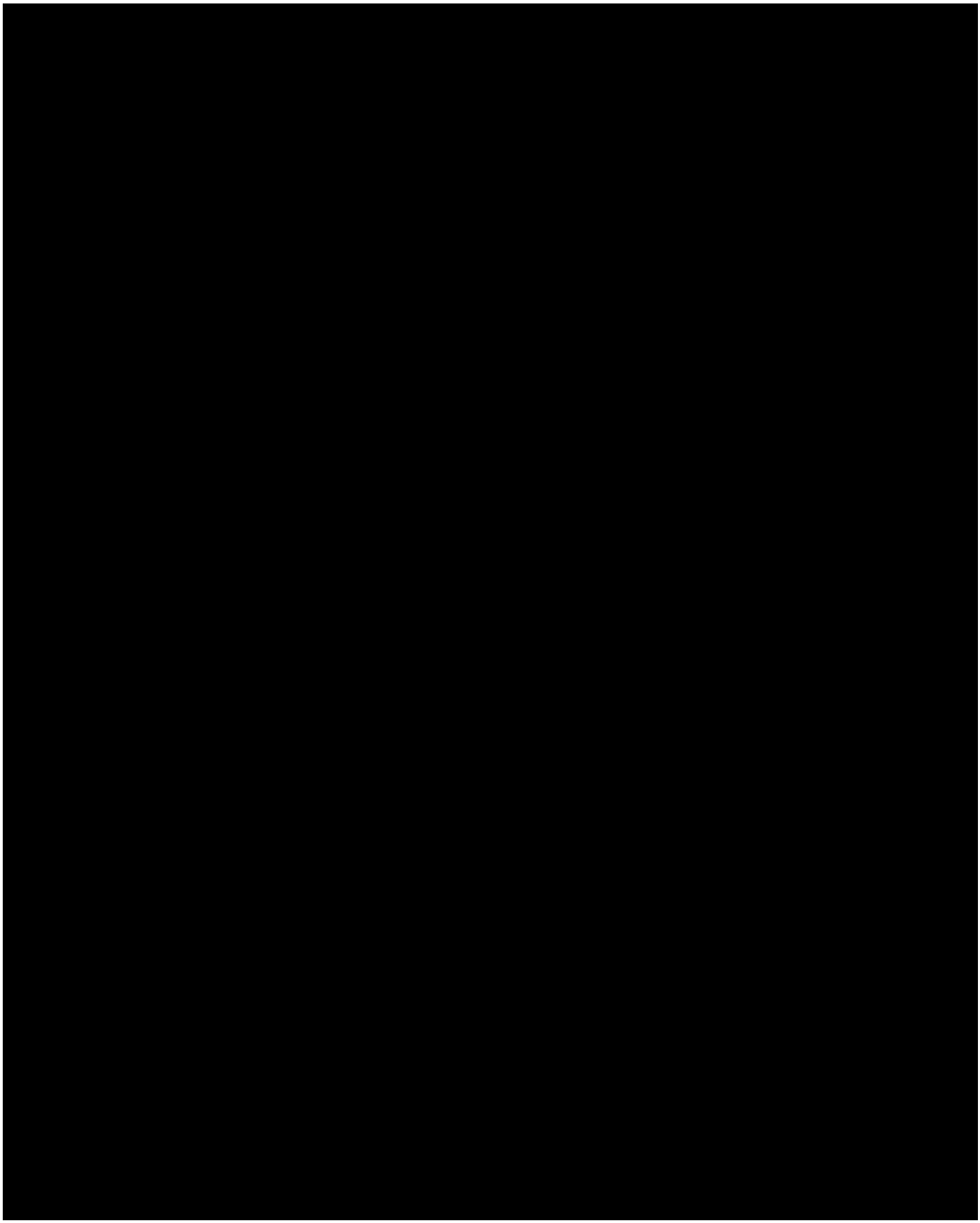


[redacted]

[redacted]

[redacted]

[52] Dr. Panis testified that in his understanding of Plaintiff's contention of how Deductible claims should have been processed, Participants' running Deductible Responsibility should have been credited at the Optum Downstream rate. Dr. Panis Tr. 141:19-142:2.



88. The experience of this actual Participant highlights why Dr. Panis's "overcharge" analysis does not provide a valid assessment of injury or damages—even in his (incorrect) but-for world. He fails to conduct the individualized inquiry that is necessary to determine how this Participant's earlier claims history would impact the payment mechanisms dictated by the terms of the Plan, and how that would have affected the Participant's Responsibility on later claims. In particular, he fails to account for the credit to her Deductible that this Participant received in the actual world as compared to his but-for world. In other words, because a lower amount would be credited to the Participant's Deductible on claims 1 through 8 in Dr. Panis's but-for world, this Participant would owe more in Deductible for claims 9 and 10.

89. [redacted]

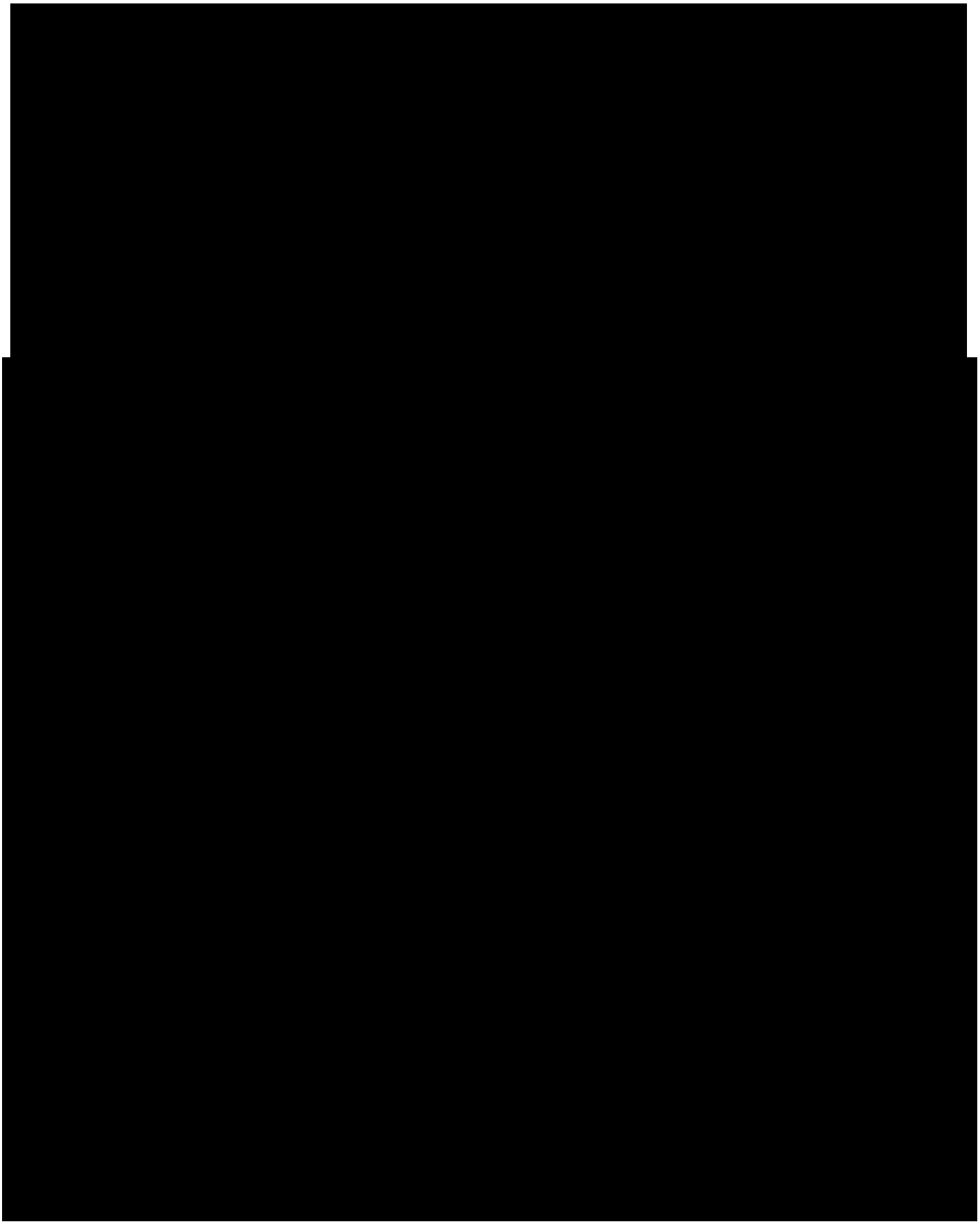
90. To properly assess the impact of the challenged conduct on this Participant, it would be necessary to analyze the impact of the Participant's claim history for the entire year, but Dr. Panis did not do so. In his deposition testimony, Dr. Panis recognized the possibility that Participants with exactly this profile might exist. He agreed that such Participants both "would come out behind under plaintiff's theory"[53] and could have accrued benefits on claims incurred after the Deductible was met.[54]

91. A second example of this phenomenon highlights another problem with Plaintiff's case: Plaintiff's assurance that as a Participant she can adequately represent the economic interests of the Sponsor of her Plan and the Sponsors of other Plans. As discussed above, Dr. Panis fails to conduct the individualized inquiry that is necessary to determine how a Participant's earlier claims history would have been different in his but-for world compared to the actual world, and how that would have affected the Participant's Responsibility on later claims. In other words,

[53] Dr. Panis Tr. 142:7-20.
[54] Dr. Panis Tr. 140:11-141:12.

Dr. Panis's ignoring of claims from the Deductible phase of a Participant's Plan can benefit Participants at the expense of their Plans, thereby advantaging some putative class members at the expense of others.

[redacted]



101. The Plan featured in Figure 5 is Self-funded, whereas the Plan featured in Figure 4 is Fully-insured. That the Plan featured in Figure 5 is Self-funded means that, unlike the Sponsor of the Fully-insured Plan featured in Figure 4, the Sponsor of the Plan featured in Table 5 could theoretically incur an alleged "overcharge." However, because Dr. Panis ignores the impact of

his but-for world on the Participant's Deductible, he understates the impact to the Plan under Plaintiff's theory of the case (the flip side of the benefit to the Participant).

102. In the actual world, the Plan incurred Responsibility for part of claims 12 and 13, when in Dr. Panis's but-for world, it would have incurred no Responsibility; in Dr. Panis's but-for world, the Participant would bear all Responsibility for claims 12 and 13 as part of her Deductible. However, Dr. Panis does not account for this reallocation of Responsibility to the Participant from the Plan in his "overcharge" calculation because he fails to conduct the individualized inquiry that is necessary to determine how this Participant's earlier claims history would have been different in his but-for world. As a result, the Participant in this case would benefit from Dr. Panis's incorrect methodology (by being misclassified as suffering an "overcharge" when she actually came out ahead due to the Agreements) at the expense of the Plan.

103. This example highlights the failure of Dr. Panis's methodology to mediate correctly the interests of Participants and Plans. One consequence of Dr. Panis's (incorrect) but-for world is the shifting of Participants into the Deductible phase of their Plan for a longer period of time, which causes them to incur greater Responsibility. His "overcharge" calculation ignores that shifting, thereby making his but-for world look more favorable (and by comparison, the Agreements look less favorable) to Participants than if he had considered the shifting. By the same token, ignoring the shifting makes his but-for world look less favorable (and by comparison, the Agreements look more favorable) to Plans than if he had considered the shifting. Put another way, even accepting Dr. Panis's incorrect but-for world as the right comparison, which it is not, his methodology does not correctly account for the implications of his own assumptions for the consequences of the Agreements for Participants versus Plans.

104. Plaintiff is purporting to represent putative classes of both Plans and Participants. But the interests of Plans and Participants can easily conflict economically under Plaintiff's theory, as in the situation discussed above. In this example, the Participant exhausted her Deductible more quickly in the actual world than she would have in Dr. Panis's but-for world, saving her money. That Participant's Plan began bearing Responsibility for her claims more quickly in the actual world than it would have in Dr. Panis's but-for world. In this scenario, the benefit to

Participants comes at the expense of Plans, meaning that under Plaintiff's theory Plans and Participants have conflicting interests that can only be reconciled with individualized inquiry.

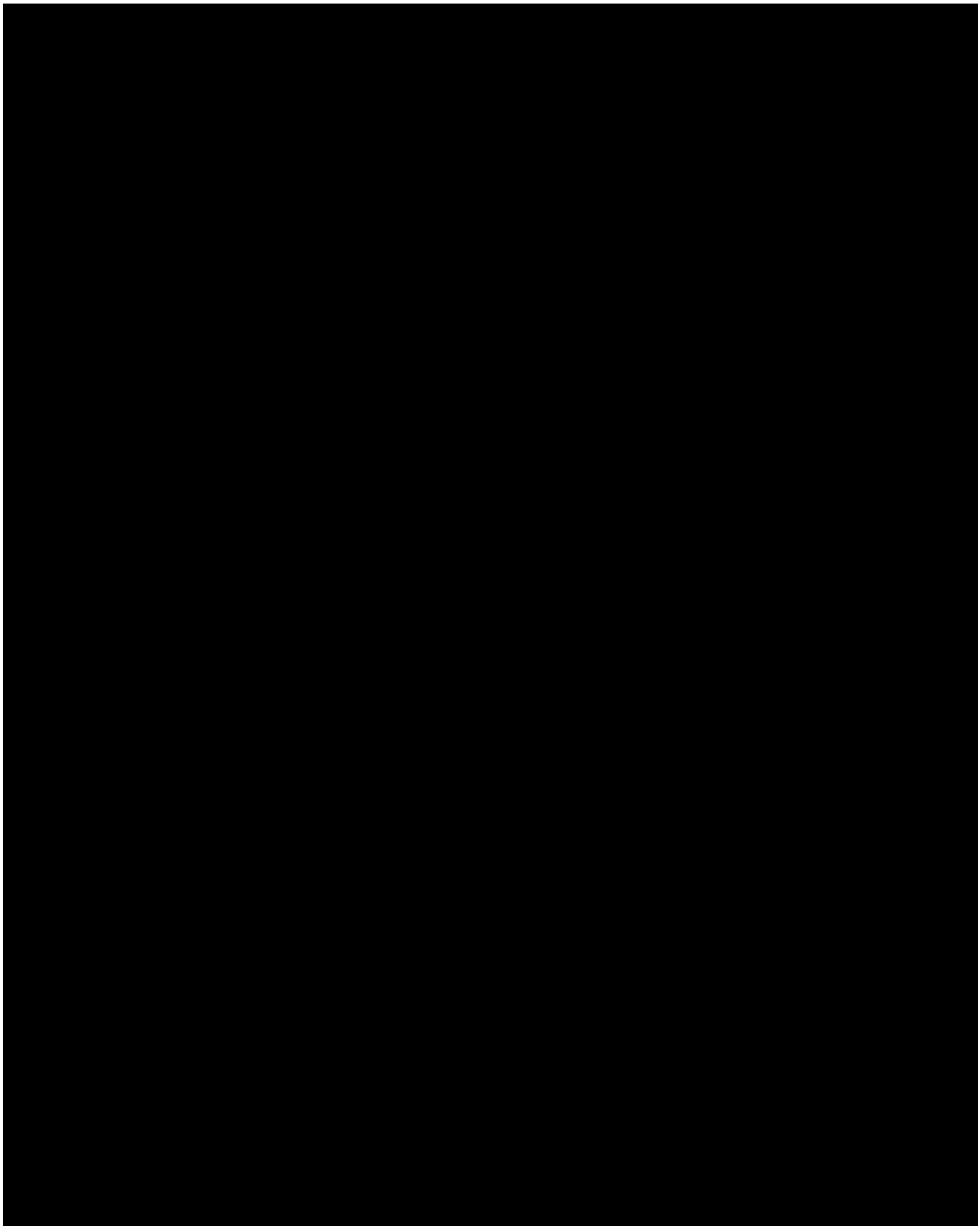
IX. EVEN ACCEPTING DR. PANIS'S INCORRECT BUT-FOR WORLD, THE NAMED PLAINTIFF, MS. PETERS, ACTUALLY BENEFITED FINANCIALLY FROM THE AETNA-OPTUM AGREEMENTS

105. The disconnect between Dr. Panis's "overcharge" calculation and economic reality is not limited to isolated examples: It is evident even in the case of the named Plaintiff, Ms. Peters.[55] [redacted] This is purely a product of Dr. Panis's faulty methodology, however, and not a measure of any economic injury. To the contrary, Ms. Peters did *not* suffer any economic injury, even as compared to Dr. Panis's (incorrect) but-for world in which she and her Plan would have obtained the Optum Downstream rates. [redacted] As a result, Ms. Peters benefited from the Agreements, even in Dr Panis's (incorrect) but-for world. Dr. Panis agreed in his deposition that "[i]f a class member would have paid the same amount out of pocket based on the Optum downstream rates that he or she paid based on the Aetna per-visit rates," that class member was not "overcharged" in the aggregate and "would not be injured."[56] That is even more true as to a member who came out *ahead* in the aggregate—as did Ms. Peters.

106. To determine what Ms. Peters's Participant Responsibility would be in Dr. Panis's but-for world, I examined her claims from [redacted]. Analyzing her claims from different calendar years separately is necessary because Participants' Deductibles [redacted] generally reset every calendar year, and the timing of when a Participant meets her Deductible may affect her Participant Responsibility.

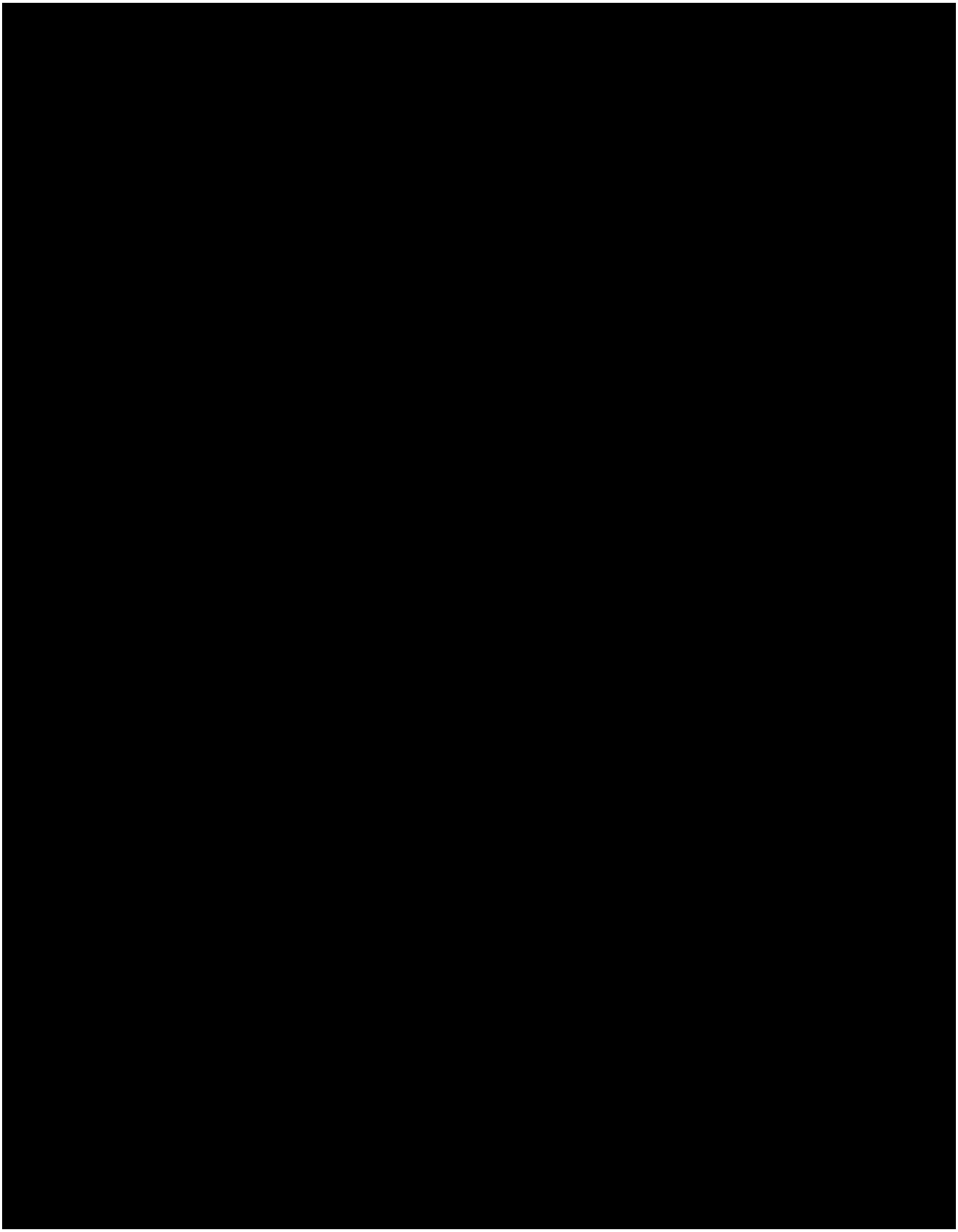
107. [redacted]

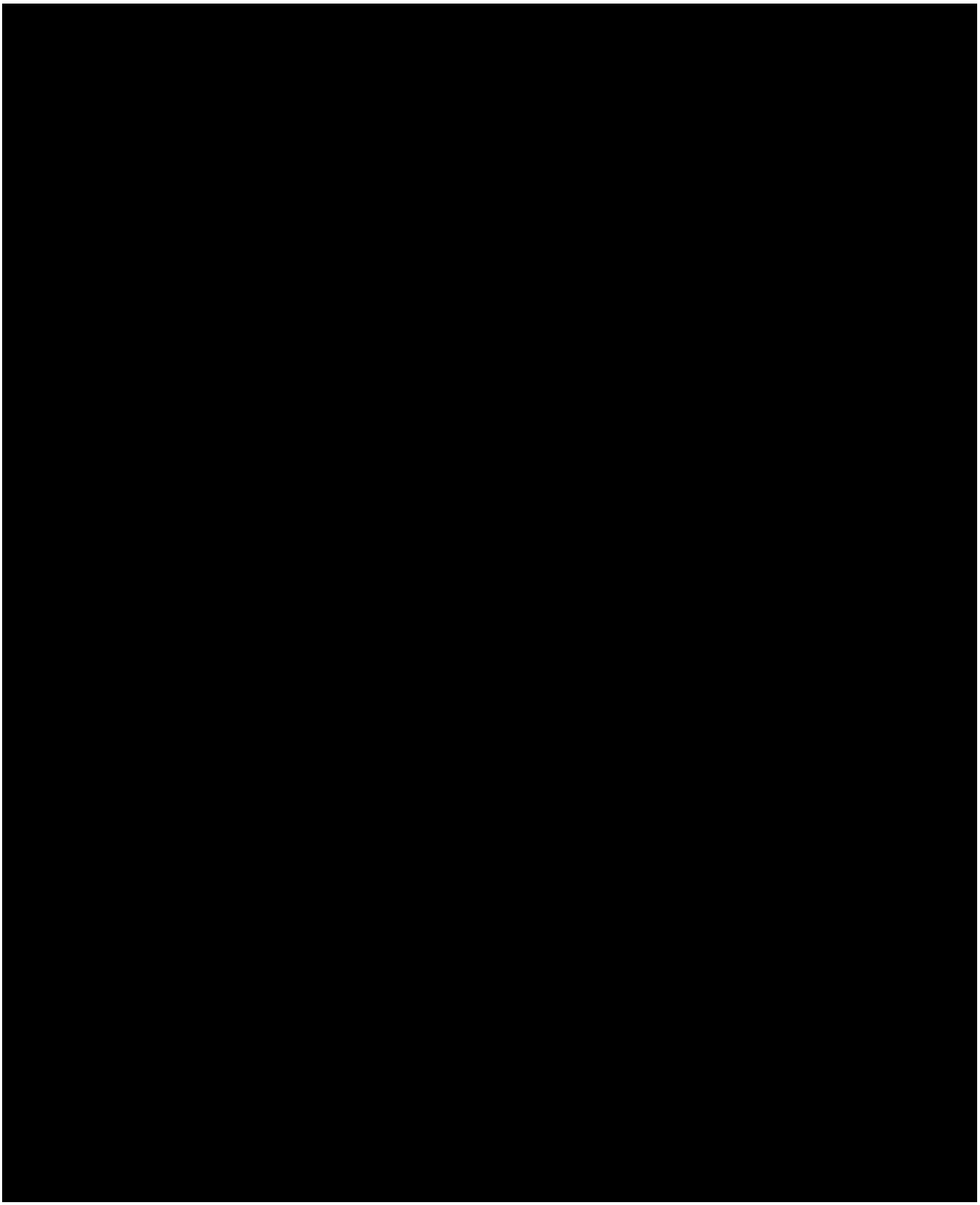
[55] See, for example, Plaintiff's Responses to Aetna's First Set of Interrogatories; Plaintiff's Second Supplemental and Amended Responses to Aetna's First Set of Interrogatories.
[56] Dr. Panis Tr. 99:3-15.

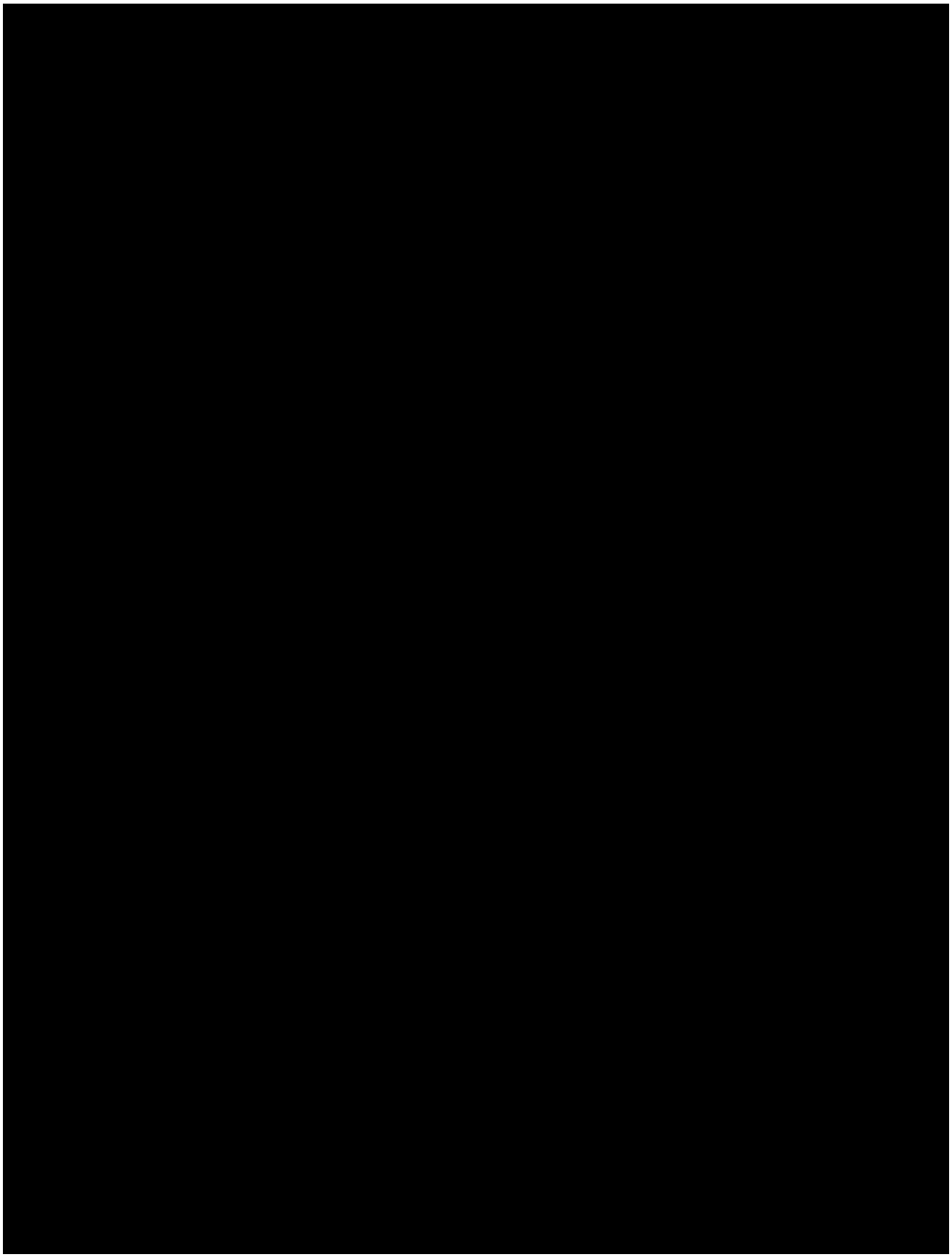


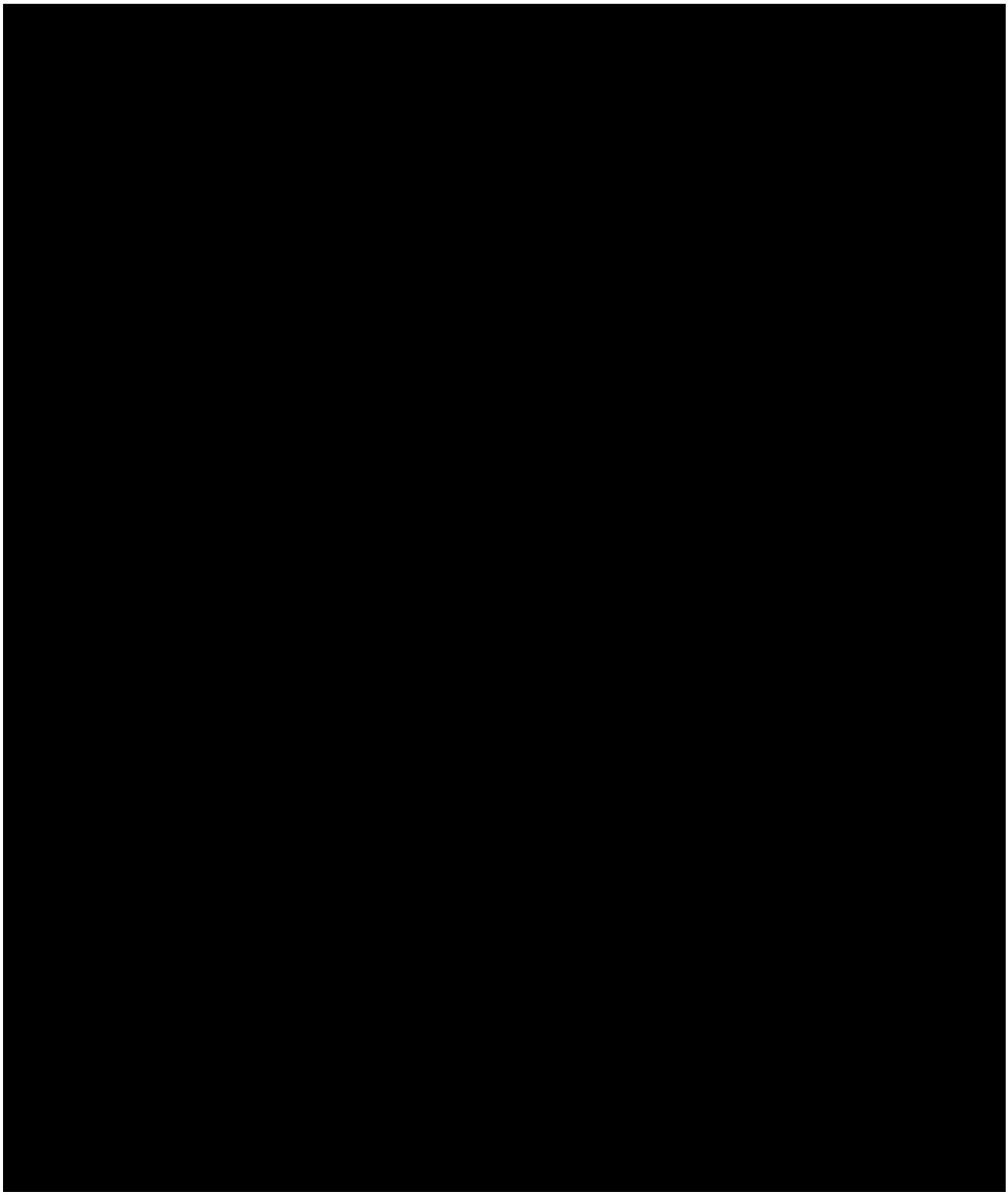
[redacted]

[57] [redacted]

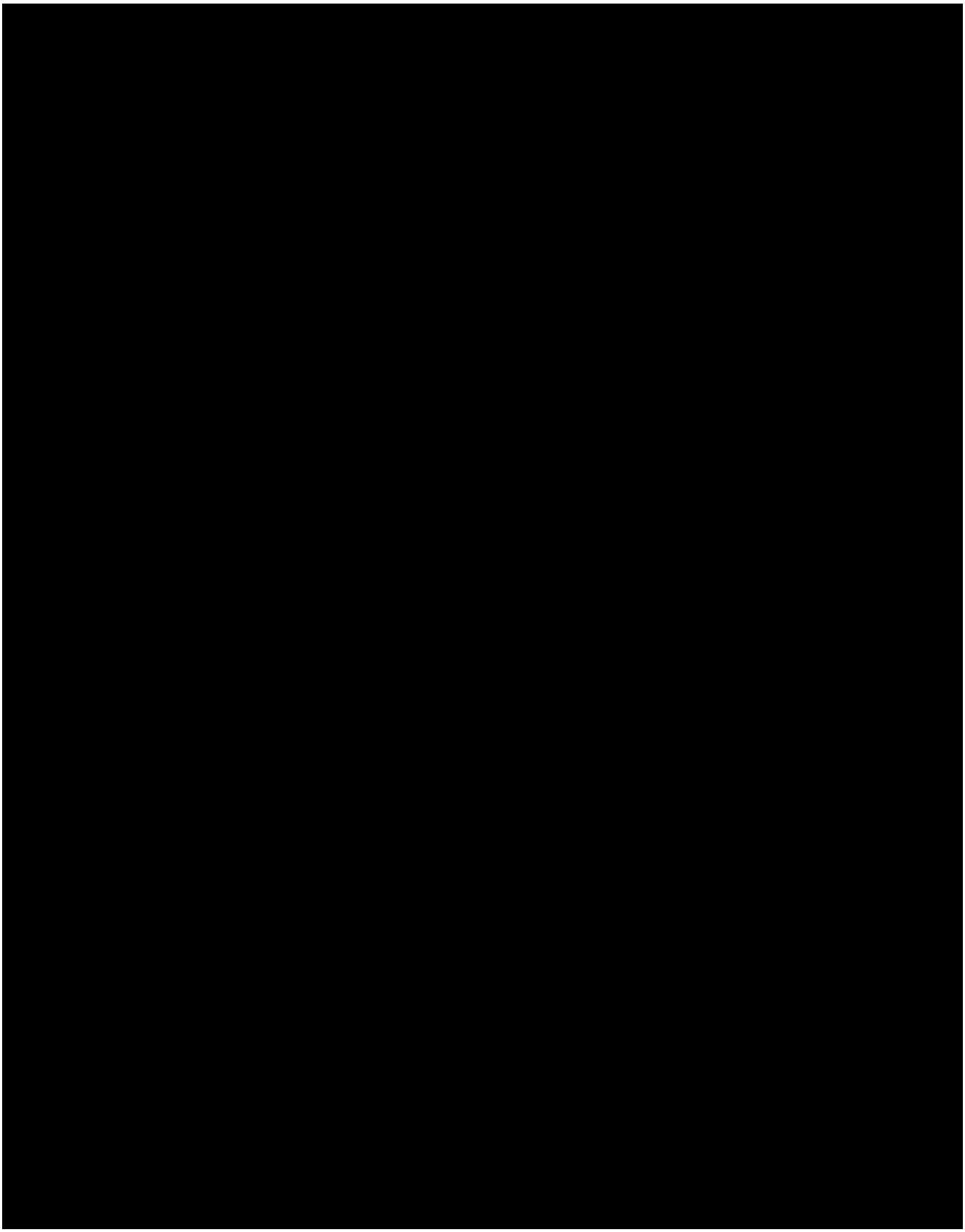








[58] See, for example, AETNA-PETERS-00003170, AETNA-PETERS-00003208, AETNA-PETERS-00003229, AETNA-PETERS-00003288, AETNA-PETERS-00003294, AETNA-PETERS-00003315, AETNA-PETERS-00003325.



[redacted]

128. As illustrated by the case study of Ms. Peters, as well as the earlier examples drawn from actual data for putative class members, a detailed individualized inquiry is needed to assess the impact of the challenged conduct on particular Participants or Plans. Dr. Panis has not conducted such an inquiry. Instead, he has offered a faulty methodology that improperly ignores

[59] [redacted]

a substantial portion of claims and their impact on claims history. As a result, Dr. Panis's methodology does not reliably identify injury or damage among putative class members, and labels class members as "overcharged" when they actually benefited—including the named Plaintiff herself.

Signed on the 8th of June, 2018, at Stanford, CA.

Dr. Daniel P. Kessler

Appendix A

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B.A.	Economics, Harvard University, 1988

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Professor, Stanford Law School, 2009-
Professor, by courtesy, Stanford School of Medicine, Department of Health Research and Policy, 2008-
David S. and Ann M. Barlow Professor in Management, Graduate School of Business, Stanford University, 2007-10
Visiting Professor, Harvard Law School, 2007
Senior Fellow, Hoover Institution, Stanford University, 2006-
Professor, by courtesy, Stanford Law School, 2004-2009
Professor, Graduate School of Business, Stanford University, 2003-
Visiting Associate Professor, Wharton School, University of Pennsylvania, 2002-03
Associate Professor, Graduate School of Business, Stanford University, 1998-2003
Assistant Professor, Graduate School of Business, Stanford University, 1994-98

Awards and Fellowships:

Affiliate, Stanford Center on Longevity, 2008-
Health Care Research Award, National Institute for Health Care Management Foundation, 2003
Fellow, Center for Advanced Study in the Behavioral Sciences, 2003-04
Graduate School of Business Trust Faculty Fellow, 2000-01
Affiliate, Center for Social Innovation, Stanford Graduate School of Business, 2000-
Research Associate, National Bureau of Economic Research, 1999-
Public Policy Advising Award, Stanford University, 1998
Kenneth J. Arrow Award for Best Paper in Health Economics, International Health Economics Association, 1997
Affiliate, Center for Health Policy, Stanford University, 1997-
Class of 1969 Faculty Scholar, Stanford Graduate School of Business, 1997-98
National Fellow, Hoover Institution, 1997-98
John M. Olin Faculty Fellow, 1996-97
Faculty Research Fellow, National Bureau of Economic Research, 1994-99

Academic Publications:

"ACA Marketplace Premiums and Competition Among Hospitals and Physician Practices," with Maria Polyakova, M. Kate Bundorf, and Laurence C. Baker, *American Journal of Managed Care* 24(2): 85-90 (2018).

"The Effect of Medicare Advantage on Hospital Admissions and Mortality" with Christopher Afendulis and Michael Chernew, *American Journal of Health Economics* 3(2): 254-79 (2017).

"Hospital Ownership of Physicians: Hospital Versus Physician Perspectives" with Laurence C. Baker, Aileen M. Devlin, and M. Kate Bundorf, *Medical Care Research and Review*: 1-12 (2016).

"The Effect of Hospital/Physician Integration on Hospital Choice" with Laurence C. Baker and M. Kate Bundorf, *Journal of Health Economics* 50: 1-8 (2016).

"Medicare Advantage Plans Pay Hospitals Less Than Traditional Medicare Pays" with Laurence C. Baker and M. Kate Bundorf, *Health Affairs* 35: 1444-51 (2016).

"Does Health Plan Generosity Enhance Hospital Market Power?" with Laurence C. Baker and M. Kate Bundorf, *Journal of Health Economics* 44: 54-62 (2015).

"Designing Antitrust Policy for Accountable Care Organizations," with Laurence C. Baker and M. Kate Bundorf, *Journal of Competition Law & Economics* 11: 317-29 (2015).

"Expanding Patients' Property Rights in Their Medical Records," with Laurence C. Baker and M. Kate Bundorf, *American Journal of Health Economics* 1: 82-100 (2015).

"Patient Preferences Explain a Small But Significant Share of Regional Variation in Medicare Spending," with Laurence C. Baker and M. Kate Bundorf, *Health Affairs* 33: 957-63 (2014).

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Appendix B

Appendix B
Documents And Data Sources Considered In Forming Opinions

Class Action Complaint (filed June 12, 2015)

Expert Report of Constantijn Panis, Ph.D. (April 27, 2018)

Transcript of Deposition of Constantijn Panis, Ph.D. (May 30, 2018)

Transcript of 30(b)(6) Deposition of Optum (March 8, 2018)

Transcript of Deposition of Sandra M. Peters (March 5, 2018)

Transcript of Deposition of Jennifer Cross Hennigan (March 2, 2018)

Transcript of 30(b)(6) Deposition of Aetna (March 1, 2018)

Plaintiff's Responses to Aetna's First Set of Interrogatories (January 12, 2017)

Plaintiff's Second Supplemental and Amended Responses to Aetna's First Set of Interrogatories (May 24, 2018)

AETNA-PETERS-00000619

AETNA-PETERS-00003170

AETNA-PETERS-00003208

AETNA-PETERS-00003229

AETNA-PETERS-00003288

AETNA-PETERS-00003294

AETNA-PETERS-00003315

AETNA-PETERS-00003325

AETNA-PETERS-00006165 (*native version*)

AETNA-PETERS-00012640

AETNA-PETERS-00015288

AETNA-PETERS-00015290

AETNA-PETERS-00026201

AETNA-PETERS-00041160

AETNA-PETERS-00067862

AETNA-PETERS-00011307 [Aetna claim data]

AETNA-PETERS-00065902 [Aetna claim data]

AETNA-PETERS-00065903 [Aetna claim data]

OPTUM-PETERS-00004155

OPTUM-PETERS-00004181

OPTUM-PETERS-00018349 [Optum claim data]

OPTUM-PETERS-00018350 [Optum claim data]

OPTUM-PETERS-00018351 [Optum claim data]

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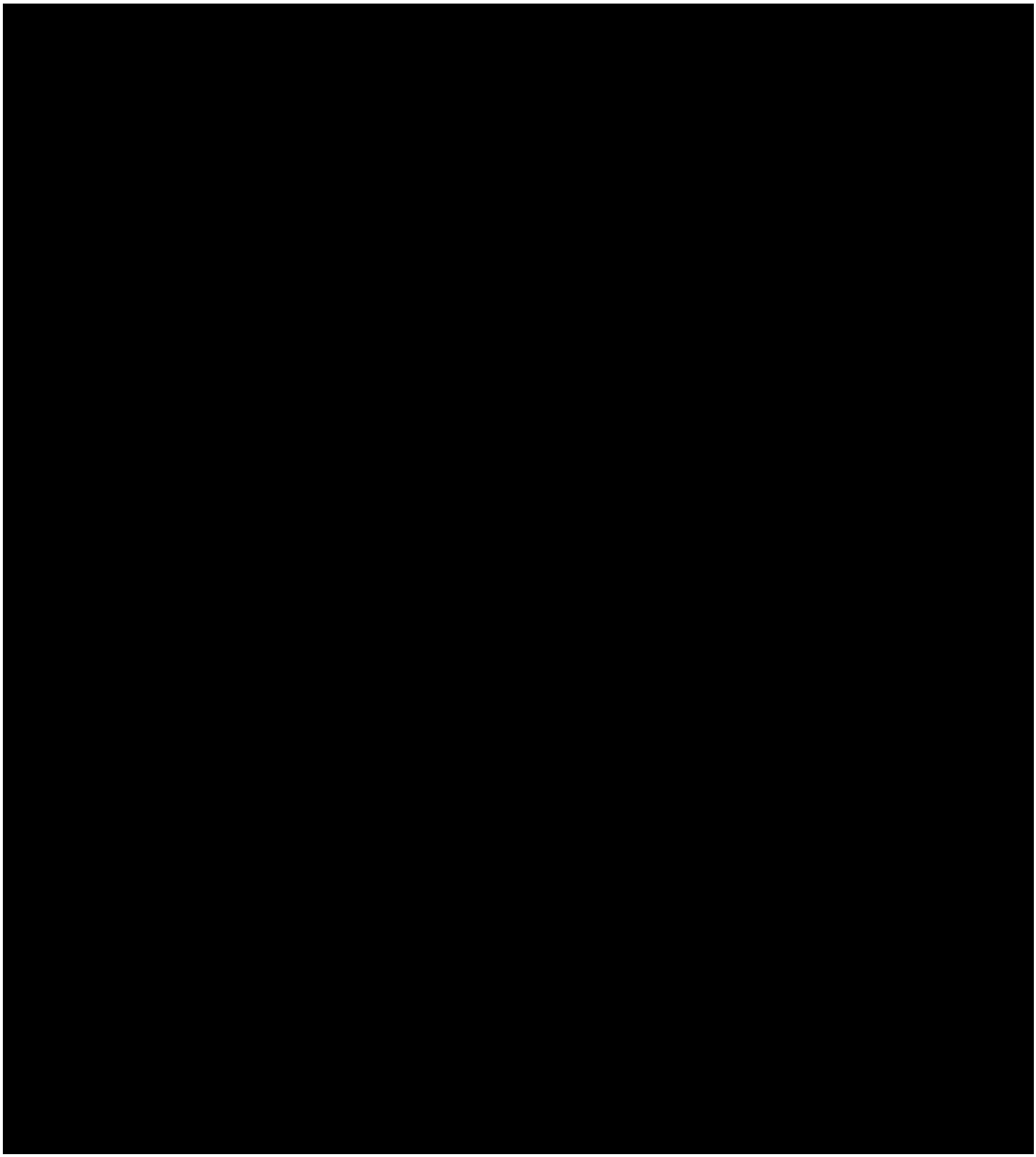
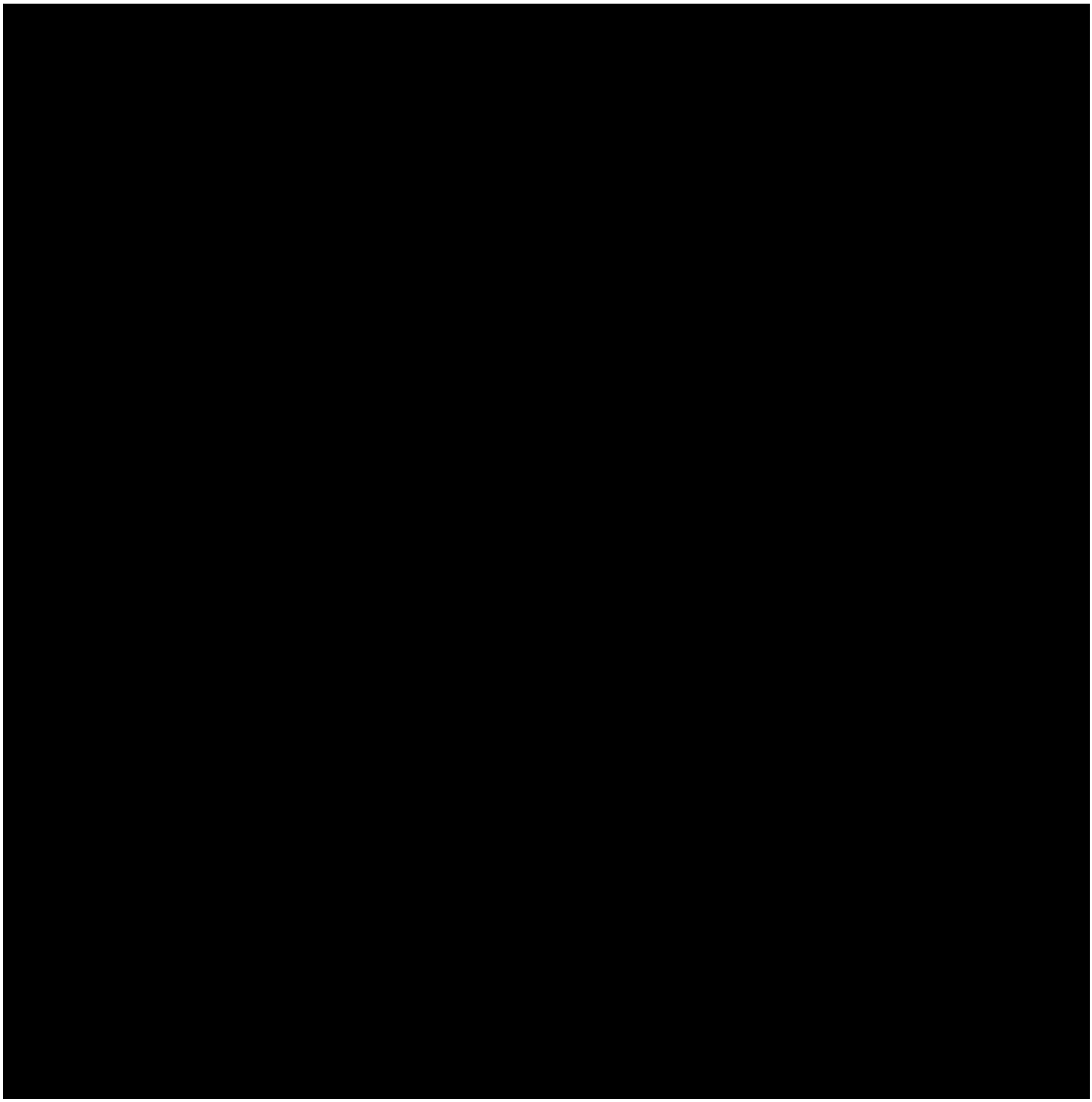
Appendix C

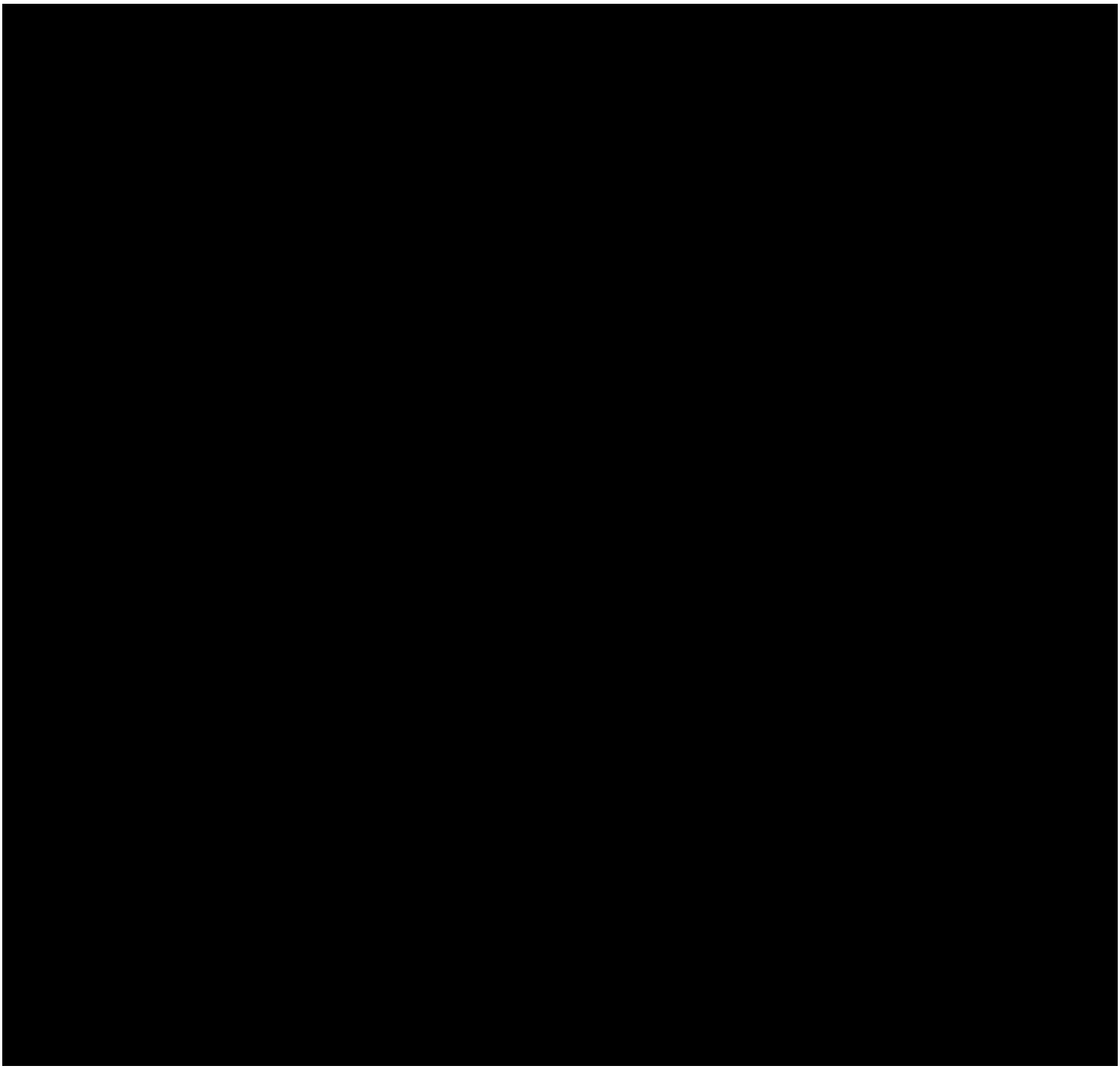
Appendix D

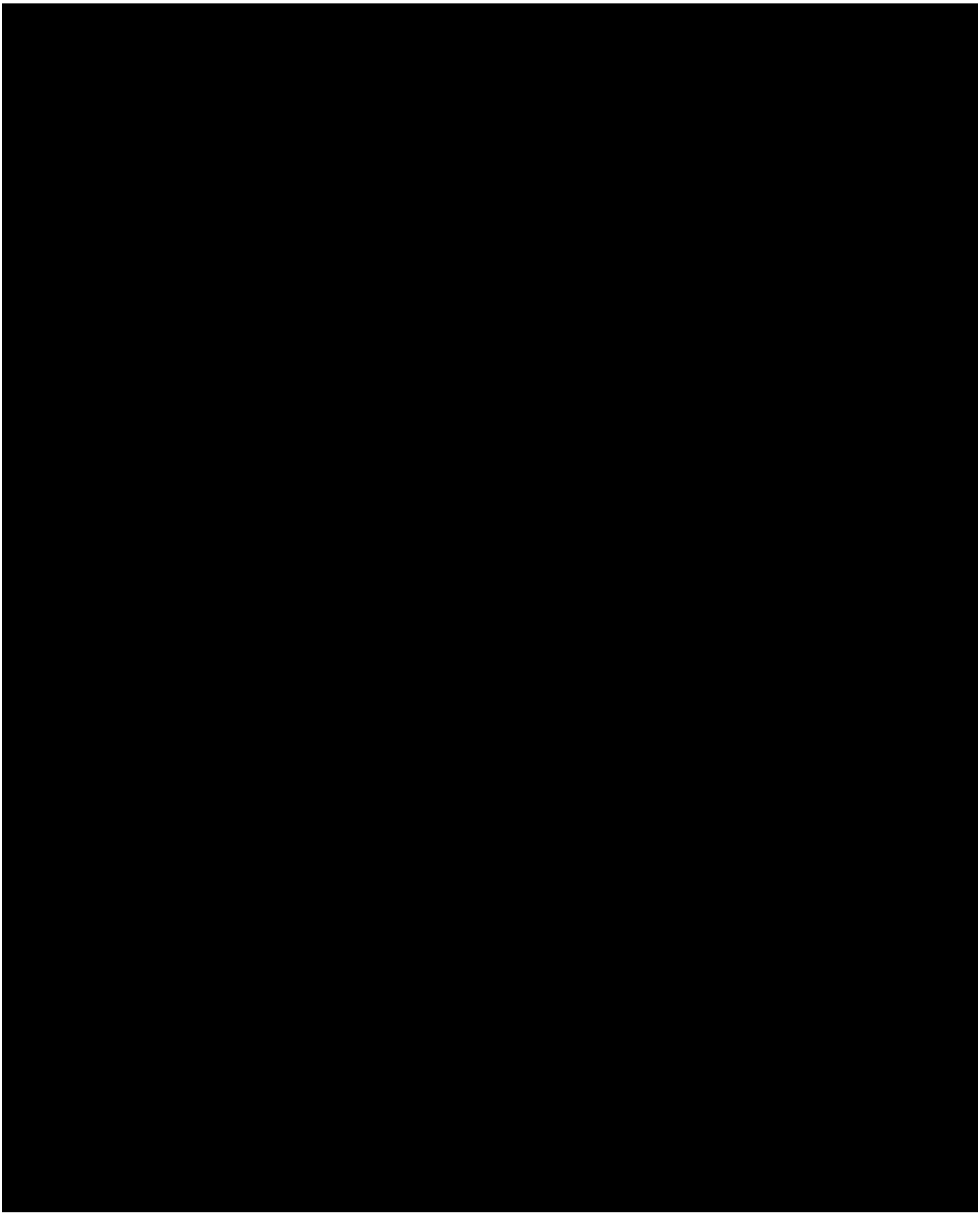
Appendix E



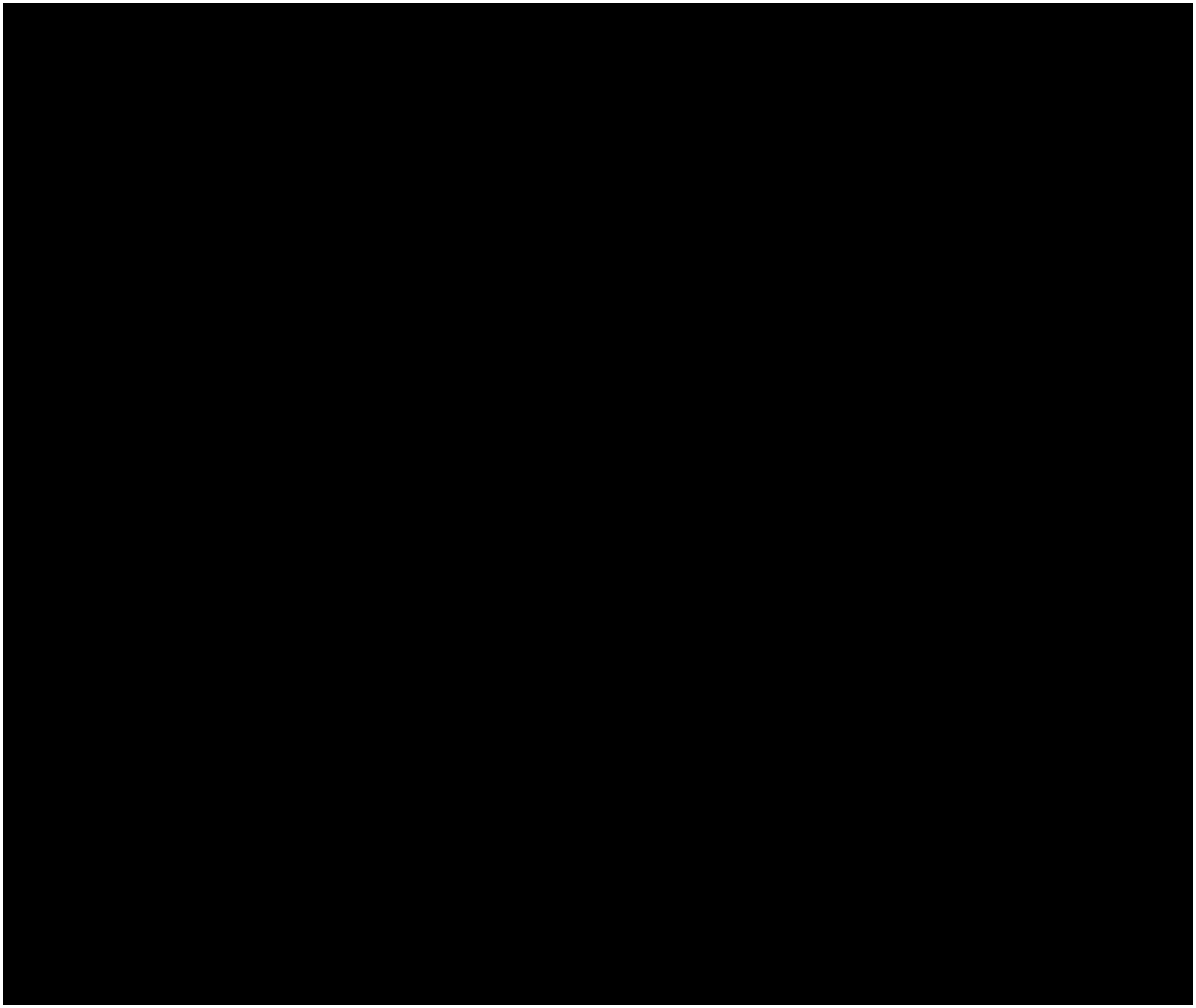


Appendix F





Appendix G



Appendix H